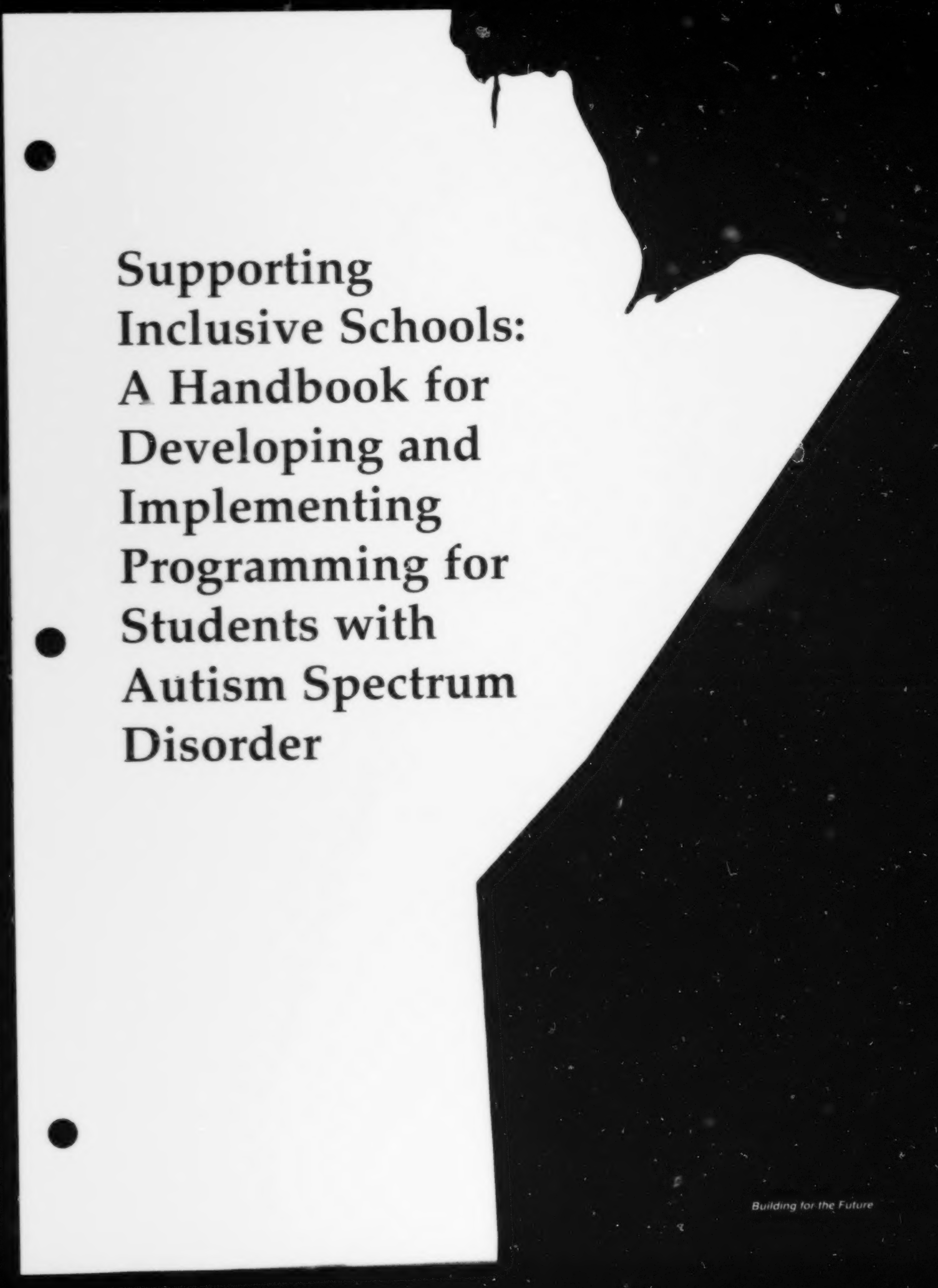

Supporting Inclusive Schools: A Handbook for Developing and Implementing Programming for Students with Autism Spectrum Disorder

Building for the Future

SUPPORTING INCLUSIVE SCHOOLS: A HANDBOOK FOR DEVELOPING AND IMPLEMENTING PROGRAMMING FOR STUDENTS WITH AUTISM SPECTRUM DISORDER

2005

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PHILOSOPHY OF INCLUSION

Manitoba Education, Citizenship and Youth is committed to fostering inclusion for all people.

Inclusion is a way of thinking and acting that allows every individual to feel accepted, valued, and safe. An inclusive community consciously evolves to meet the changing needs of its members. Through recognition and support, an inclusive community provides meaningful involvement and equal access to the benefits of citizenship.

In Manitoba, we embrace inclusion as a means of enhancing the well-being of every member of the community. By working together, we strengthen our capacity to provide the foundation for a richer future for all of us.

PREFACE

Background

Autism Spectrum Disorder (ASD)* is a complex neurological disorder that affects the function of the brain. The symptoms of ASD include impairments in communication and social interaction and restricted, repetitive patterns of behaviours, interests, and activities.

ASD is referred to as a spectrum disorder because symptoms can be present in a variety of combinations and range in severity from mildly to profoundly disabling. The cause is not known and males are approximately four to five times more likely to have ASD than females.

In Manitoba schools, programming for students with ASD is done by a team, including the parents,** using an individual planning process. *Supporting Inclusive Schools: A Handbook for Developing and Implementing Programming for Students with Autism Spectrum Disorder* recognizes the need of educators for a resource to support appropriate educational programming for students with ASD.

Purpose

Supporting Inclusive Schools: A Handbook for Developing and Implementing Programming for Students with Autism Spectrum Disorder is intended to be a planning and programming resource for school teams who support students with ASD.

---

* *ASD is increasingly used in reference to Pervasive Developmental Disorders, including Autism. In recognition of current usage, the use of ASD in this document includes Autism and the other Pervasive Developmental Disorders.*

** *In this document, the term "parents" refers to both parents and guardians and is used with the recognition that in some cases only one parent may be involved in a student's education.*

How to Use the Handbook

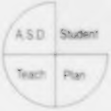
The handbook is organized into five chapters that coincide with the steps involved in the planning, development, and implementation of appropriate educational programming for a student with ASD.

A.S.D.
Student
Teach
Plan

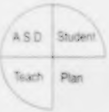
Each chapter begins and ends with this graphic. The four segments of the circle represent the four stages of planning. The highlighted segment of the circle delineates the phase of planning described in the chapter.

A.S.D.
Student
Teach
Plan

The first stage of planning involves understanding Autism Spectrum Disorder. *Chapter 1: Autism Spectrum Disorder* contains a description of the primary characteristics and associated features of ASD.



Chapter 2: The Student with Autism Spectrum Disorder describes the process of developing an individual student profile. A student profile summarizes what the team knows about the student and his (*) priority learning needs.



The student profile described in Chapter 2 is then used as the basis for developing an Individual Education Plan (IEP), which is described in *Chapter 3: Planning for the Student with Autism Spectrum Disorder.*

A.S.D.
Student
Teach
Plan

Chapter 4: Teaching the Student with Autism Spectrum Disorder describes how students with ASD learn and provides a range of general instructional strategies for students across the Autism spectrum. The chapter concludes with a process for teaching a new activity or skill.

A.S.D.
Student
Teach
Plan
Strategies

Chapter 5: Instructional Strategies for the Student with Autism Spectrum Disorder concludes the planning process by providing a overview of instructional strategies for students with ASD. The selection and implementation of strategies is guided by knowledge of ASD and the student, the plan, and how the student learns.

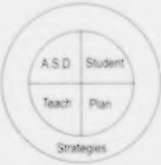
Not all teams will begin in the same place. The entry point in the process depends on the team's familiarity with ASD, the student, planning (and planning that has been done for the student in the past), and instructional strategies. A team that is receiving a new student will need to spend more time creating the student profile and developing the IEP than a team that has gone through the process with the student before. In this case, the team may begin with a review of the profile to ensure the information is current, and then proceed to update and revise the IEP.

The handbook also contains additional information in the form of appendices.

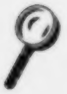
* *Masculine pronouns are used throughout the document. Females may also have ASD.*

Graphics

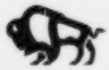
Throughout the handbook, graphics are used to guide the reader's attention to specific items.



This graphic represents different stages in the planning cycle for students with ASD.



This graphic is used to highlight examples or case studies.



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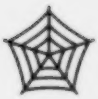
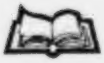
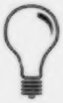


This graphic references Internet websites that provide additional information about the topics covered in this handbook.



This graphic references book or journal articles cited in the text.



This graphic references suggested readings or resources. The *Suggested Readings* section of the handbook contains complete references for items suggested in the text of the handbook. Words in parentheses refer to the section of the *Suggested Readings* where the reference may be found.

INTRODUCTION

Introduction

All students are unique. As learners, students have individual areas of strength and weakness, as well as individual interests and preferences. In Manitoba all students, including those with Autism Spectrum Disorder (ASD), have a right to appropriate educational programming. Because ASD is a *spectrum* disorder, its symptoms and their severity range from mildly to severely disabling. As a result, programming for students with ASD may range from the provincial curricula to highly individualized programming. This handbook explores a process for developing appropriate educational programming for all students with ASD.

There are specific characteristics all students with ASD share. These include impaired social interaction, impaired communication, and restricted patterns of behaviour, interests, and activities. However, no two students with ASD will display these characteristics in the same way. In fact, one of the characteristics of students with ASD is an uneven (or "scattered") developmental profile, which means that a student may be at a higher level of development in one domain—cognitive, for example—than another domain—communication, for example. As a result, each student with ASD has unique strengths and learning needs. Effective strategies for education, therefore, depend on an understanding of ASD as well as a thorough understanding of the student.

Developing an Individual Education Plan (IEP) for a student with ASD is not done by one person alone. It requires the collaboration and co-operation of a team of people which includes parents and educators (the in-school team) and other professionals (the support team) such as doctors, psychologists, speech-language pathologists, and so on.

Parents, with their knowledge of the student and ongoing involvement with his educational outcomes at home and in the community, are invaluable members of the team. The student should be a part of the team and participate in the process as much as possible.

Team members have specific roles and responsibilities which include gathering and sharing information, determining what is known about the student and what needs to be known, identifying priority learning needs, and developing and implementing programming for the student. Following the steps involved in the planning process in this handbook enables the team to develop appropriate educational programming for the student. The planning process includes

- understanding Autism Spectrum Disorder (Chapter 1)
- creating a student profile (Chapter 2)
- developing and implementing an IEP (Chapter 3)

- preparing to teach the student with ASD (Chapter 4)
- selecting instructional strategies (Chapter 5)

The school team determines the direction of programming that fits the student's profile, keeping in mind that

- no two students with ASD are the same. The symptoms of ASD may range from relatively mild to profoundly disabling because it is a spectrum disorder.
- almost all students with ASD will have needs that go beyond the scope of the provincial curricula

For a student with ASD, appropriate educational programming should occur throughout his school experience, from transition into school, throughout the school years, and finally through transition from school to life in the community. With careful planning, knowledge of ASD as well as the student, and an understanding of instructional strategies best suited to the student's profile, appropriate educational programming can be achieved.

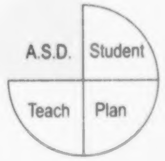
CHAPTER 1:
AUTISM SPECTRUM DISORDER

Autism Spectrum Disorder *3*
- Diagnosis *3*
- Causes *4*
- Prevalence *5*

Primary Characteristics of ASD *5*
- Social Interaction *6*
- Communication *9*
- Restricted Patterns of Behaviours, Interests, and Activities *13*

Associated Features of ASD *16*
- Unusual Responses to Sensory Stimuli *16*
- Anxiety *20*
- Resistance and Anger *21*
- Limited Problem Solving and Independence *21*
- Scattered Developmental Profile *22*

CHAPTER 1: AUTISM SPECTRUM DISORDER



The purpose of Chapter 1 is to provide information about the primary characteristics and associated features of Autism Spectrum Disorder (ASD). This knowledge prepares the team for learning how an individual student is affected by ASD. All students, including those with ASD, are unique. Only once the team understands the student and the particular way in which that student is affected by ASD can the team begin to develop and implement appropriate educational programming.

Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a complex neurological disorder that affects the functioning of the brain. It is a lifelong developmental disability that is characterized by impairments in communication and social interaction, and by restricted, repetitive, and stereotypic patterns of behaviour, interests, and activities.

ASD is referred to as a spectrum disorder because the symptoms can be present in a variety of combinations, and can range from mild to severe. ASD can occur with or without other disabilities. No single behaviour identifies ASD, and students generally will not show all possible symptoms.

Students with ASD may be similar in some ways and different in others due to individual variations in

- the number and kind of symptoms
- intellectual ability
- personality and temperament
- family environment
- educational and community experiences and opportunities

The term Autism Spectrum Disorder (ASD) is increasingly used to refer to Autism and the other Pervasive Developmental Disorders. In recognition of current usage, therefore, this handbook uses ASD in reference to all PDDs, including Autism.

Diagnosis

ASD is diagnosed through the presence or absence of certain behaviours, characteristic symptoms, and developmental delays. No biological marker or laboratory test exists to allow diagnosis of ASD. Diagnosticians use their experience, judgment, and *DSM-IV-TR* criteria.

See Appendix A: *DSM-IV-TR* Diagnostic Criteria.

The *Diagnostic and Statistical Manual* (*DSM-IV-TR*) classifies Autism within a broader group of Pervasive Developmental Disorders (PDD). PDD is an umbrella term for disorders characterized by impairments in reciprocal social interaction skills and communication skills, and the presence of stereotypical behaviours, interests, and activities. Pervasive Developmental Disorders include

- Autistic Disorder
- Childhood Disintegrative Disorder (CDD)
- Rett's Disorder
- Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)
- Asperger's Syndrome

Note: Asperger's Syndrome (AS) shares many characteristics of Autism, but there is debate whether AS is an independent diagnostic category or another dimension at the milder end of the Autism continuum. Information specific to AS is provided in Appendix B.

A diagnosis of ASD is made by qualified professionals with appropriate clinical training and expertise. Ideally, diagnosis and assessment involve a multidisciplinary team that includes parents, a pediatrician or psychiatrist, a psychologist, a speech-language pathologist, occupational and physical therapists, and an educator. A medical assessment, including a medical and developmental history taken through discussions with the parents, is conducted to provide a picture of early developmental milestones and parents' recognition of symptoms, and to rule out other possible causes for the symptoms, as many characteristics associated with ASD are also present in other disorders. A psychologist gathers information about the child's developmental level and behaviour, and a speech-language pathologist assesses speech, language, and communicative behaviours. Occupational and physical therapists assess the child's environmental sensitivities, fine and gross motor abilities and needs, and social interaction skills. Teachers and other school personnel provide perspectives on how the child learns and interacts with adults and peers.

The team approach to assessment provides an overall picture of the student and can rule out other contributing factors. It is important because students with ASD typically have an uneven developmental profile.

Causes

The cause or combination of causes of ASD is not fully known. There is evidence of genetic factors, possibly involving the interaction of several different genes. ASD may occur more frequently in families with a history of ASD or related disorders, but it may also occur in families with no apparent history. There is increased likelihood of ASD or other developmental disabilities among siblings of affected children.

Recent investigations suggest a biological basis for ASD. The brains of student with ASD appear to differ in structure and function from those of people without it. Ongoing research may eventually pinpoint the cause or causes of ASD.

There is no clear evidence that ASD is caused by

- parenting style—early theories that blamed parents for causing ASD have been thoroughly discredited
- vaccines—recent studies of large groups of children did not find a connection between vaccines and ASD

- food allergies
- bacterial, parasitic, or viral infections
- persistent infections
- immunological abnormalities

Medical Research Council. *MRC Review of Autism Research: Epidemiology and Causes*, 2001.

Prevalence

The generally accepted prevalence rate for Autism is between 4/5:10,000. Prevalence estimates are higher when the full spectrum of the disorder is included. Recent studies in North America and the United Kingdom suggest a prevalence of approximately 1:300 for the entire spectrum.

There is no present consensus among researchers as to whether these rates represent an increase in the number of children born with the disorder, or changes in diagnostic criteria and higher rates of identification.

There is a higher prevalence of ASD among males. Studies suggest a male-to-female ratio of between 3:1 and 4:1. One exception is Rett's Disorder, which affects only females.

Canadian Journal of Psychiatry: Vol. 48, No. 8, September 2003: 521

Primary Characteristics of ASD

The primary characteristics of ASD are shared by all students with ASD. They include significant difficulty in the acquisition and use of social interaction and communication skills and the presence of restricted, repetitive, and stereotyped patterns of behaviours, interests, and activities.

These characteristics are identified by the presence of specific indicators, which are summarized in Table 1.1.

Table 1.1: Summary of Primary ASD Characteristics and Indicators

Primary Characteristic	Indicators
Social interaction	1. marked lack of awareness of the existence or feelings of others 2. atypical seeking of comfort at times of distress 3. atypical imitation 4. unusual social play 5. limited ability to form friendships with peers
Communication	1. significant limitations in verbal and non-verbal communication 2. limited receptive communication 3. limited expressive communication
Restricted patterns of behaviours, interests, and activities	1. restricted repertoire of activities 2. stereotyped and repetitive body movements 3. persistent preoccupation with parts of objects or attachments to unusual objects 4. markedly restricted range of interests or a narrow preoccupation with one interest 5. difficulties with attention and motivation 6. need to follow routines in precise detail 7. marked distress over changes in the environment

While students with ASD share its primary characteristics, no two students are exactly the same. The characteristics (and their indicators) of ASD provide a foundation for understanding needs typically associated with ASD. This information becomes more meaningful when it is used to develop an understanding of an individual student with ASD.

Social Interaction

Indicators:

1. Marked Lack of Awareness of the Existence or Feelings of Others
2. Atypical Seeking of Comfort at Times of Distress
3. Atypical Imitation
4. Unusual Social Play
5. Limited Ability to Form Friendships with Peers

1. Marked Lack of Awareness of the Existence or Feelings of Others

When six-year-old Jenna wants something at home or in the classroom that she can't get for herself, she takes the forearm of the nearest adult and places the adult's hand on what she wants, without looking at the adult or communicating in any other way.

Seven-year-old Tim bumps classmates seated on the carpet and steps on their hands without seeming to notice their presence or their reactions to him.

Nine-year-old Max sits down in the middle of a hallway full of older students at their lockers at 3:30 p.m. He seems oblivious to the jostling and grumbling, but catches the attention of a passing adult, rolls his eyes, and says, "I'm surrounded by idiots."

Students with ASD typically experience significant difficulty relating to others. In some cases, they may act as if others do not exist. A student may acknowledge someone's presence in order to have a need met (e.g., to obtain an object) and subsequently ignore the person. The student may demonstrate this apparent aloofness by

- appearing to be deaf
- failing to respond when called
- appearing not to listen when spoken to
- failing to produce a facial expression appropriate to the occasion, or producing a facial expression that is inappropriate to the occasion
- avoiding eye contact
- failing to enjoy or return other people's affection
- treating people as if they were inanimate objects or useful tools

Students with ASD may respond socially to others in a variety of ways. Depending on the student, this absent, diminished, or atypical response to others may involve

- not sharing enjoyment, such as showing their objects of interest to others
- an unwillingness or inability to engage in co-operative play
- a tendency to spend inordinate amounts of time doing nothing or pursuing ritualistic activities
- difficulty making personal friendships
- a desire or drive for social interaction without the interaction skills to succeed

They may also be unable to appreciate or even react to others' feelings and emotions, such as pain or distress. This is a characteristic of almost all students with ASD and often impedes the development of friendships.

Students with ASD may have particular difficulty with interactions that require them to understand that other people may know different information or think different thoughts than they do. This theory may explain why students with ASD typically have difficulty trying to imagine how another person feels, or to understand that another person may not understand their speech or language.

2. Atypical Seeking of Comfort at Times of Distress

Students with ASD typically seek predictability and function best in structured activities and environments. Therefore, they often experience difficulty managing changes to their environment or routines. They may have strong emotional reactions to seemingly insignificant objects or situations, perhaps because they associate them with a previous unpleasant experience.

While typically developing students seek reassurance when afraid or in pain, students with ASD may not know how to communicate their need to others, or may not understand that people can be of assistance.

When distressed, five-year-old Amy calms herself with the noise made by brushing her fingers across a soft brush held close to her ear, rather than wanting to be cuddled or to hold a doll or stuffed toy.

3. Atypical Imitation

Students with ASD usually do not learn effectively through imitation and require direct instruction. While typically developing students may observe and successfully imitate a variety of skills and behaviours spontaneously, students with ASD generally do not. As infants, students with ASD often do not respond to simple games such as "peek-a-boo" or waving "bye-bye."

Students with ASD may not be able to focus and attend. They may lack the motor planning and coordination needed to imitate multi-step motor routines, such as tooth-brushing or other self-help or household tasks. The ability to learn by observing and imitating often remains limited as the students get older, unless they receive direct instruction and intensive practice.

Nine-year-old Max wants the attention of his classmates and makes frequent social overtures to his peers. Unfortunately, he is often ignored. One day, he approached some older boys on the playground with taunts and insults. In response, they shoved him around and ridiculed him. The next day, he gave tickets to his classmates to come to see him getting beaten up in the afternoon. Because he knows that a fight attracts a crowd (and brings him attention) he believes he has found a way to get his peers to pay attention to him.

Six-year-old Chris communicates with a few words and great agitation that he wants to stop skating with the other students and return to his classroom. His educational assistant tells him that it's not time to leave the ice yet. He looks at her and then begins swearing loudly. In the past, the consequence for swearing has always been an immediate return to his classroom from an outside activity.

Twelve-year-old Anne raises her hand and introduces sexually charged comments in class when she wants to escape tasks. She knows from experience that this behaviour always results in her being sent to sit in the hallway.

4. Unusual Social Play

Students with ASD typically experience difficulty with social and play skills. When they do play, their play is usually routine and repetitive in comparison to the spontaneous, creative, and evolving play of their peers. Many will not play with toys or other objects, or will use them in idiosyncratic ways. A toy plane, for example, may not be a thing that flies but an object that has a metallic taste, rattles when it is shaken, and makes interesting visual patterns when its propellers spin.

Underdeveloped play skills may contribute to students' difficulty interacting with others in later years. If students with ASD are not able to play with other children when they are young, they may not develop the skills necessary to interact with others when they are older. While many students with ASD begin to show interest in their peers as they get older, they often do not have the play and social communication skills required to connect meaningfully with them.

In his Kindergarten class, five-year-old David plays with blocks by lining them up in various ways on a tabletop and then moving his head back and forth to enjoy the visual effect. He loudly resists the efforts of other children to add on to his lines. He does not appear to attend to the ways in which other children use blocks for castles or garages or paths, and his use of blocks has not changed after two months of Kindergarten.

Dale and Michael, both ten, are referred to a social skills group. On the first day, they are told to play with anything in the room that they wish. They walk past the age-appropriate activities such as board games, card games, and construction toys, and head straight for the large toddler toys. They then have difficulty figuring out how they work.

Brenda Smith Myles describes a student, referred to her for aggression on the playground, who told her his favourite game was "Walker Texas Ranger." When asked how to play it, he said that you kicked people and hit them and then at the end people liked you; and that he was doing that at recess and pretty soon people would like him.

—Myles, B. S. "Thinking Outside the Box about Social Supports." Presentation sponsored by St. James-Assiniboia School Division, Winnipeg, MB, 4 February 2005.

5. Limited Ability to Form Friendships with Peers

Students with ASD tend not to spontaneously seek interaction with peers. They may not be able to tolerate being physically close to others, and may withdraw from them. They may also signal a desire for contact with others, but do so in socially inappropriate ways, such as by standing very close to someone but saying nothing, or by silently stroking another child's face or arms. Consequently, they often miss opportunities to acquire and practise social skills, leading to further social distance from others.

Of the many skills required for effective social contact, two are frequently absent or diminished in students with ASD:

- relating to peers and others in a positive and reciprocal manner
- adjusting to meet changing social demands in different contexts; for example, understanding that language or actions acceptable with peers in private conversations may not be appropriate with adults or authority figures

Eleven-year-old Matthew stands nose-to-nose to talk to peers and advances as they retreat, not noticing or understanding the social distance commonly expected.

Nine-year-old Kyle dominates every interaction with peers in group tasks and in social activities, assigning roles and making rules, changing them as necessary to ensure that he is always first and he always wins.

Communication

Indicators:

1. Significant Limitations in Verbal and Non-Verbal Communication
2. Limited Receptive Communication
3. Limited Expressive Communication

1. Significant Limitations in Verbal and Non-Verbal Communication

Students with ASD experience a range of challenges with verbal and non-verbal communication that together represent much more than just a delay in communication development.

Effective communication requires the ability to understand what others say (receptive language skills) and to give information in a way that others can understand (expressive language skills). Both receptive and expressive skills include verbal and non-verbal communication.

Verbal communication involves the use of language in spoken form to give and get information from another person.

Non-verbal communication involves the sharing of information without using spoken language. Examples of non-verbal communication include body language, facial expressions, tone of voice, and so on. Because they are unaware of many of the subtle non-verbal cues of communication, most students with ASD are unable to respond to the nuances of communication.

Underlying these problems is a difficulty in using the rules of social communication. Often, difficulty with language may reflect a lack of understanding about what is socially acceptable. It may also reflect an inability to use listener feedback to monitor speech and language.

Tony Attwood, an Australian clinician and author, tells of a young man who, when Attwood reminded him of the necessity to look at him when they conversed, said, "Why should I keep looking at you? I know where you're sitting."

—Attwood, T. "Effective Strategies to Aid Social/Emotional Development for More Able Individuals with Autism and Asperger's Syndrome." Presentation sponsored by Geneva Centre for Autism. Winnipeg, MB, 4 November 2000.

Depending on the individual, difficulties with communication may include

- absent or delayed spoken language (without the corresponding use of gesture or mime to compensate)
- failure to initiate interaction with others or to respond to the attempts of others to initiate communication (for example, not responding when called by name)
- inability to maintain an interaction by taking turns in conversation
- use of stereotypical language and repetitive use of language such as echolalia (the rote repetition of words previously heard, such as in conversations or television commercials)
- pronoun confusion, such as referring to self or others in the third person or using proper names rather than personal pronouns such as I, you, he, or she
- idiosyncratic use of words and phrases, such as echoing memorized words or phrases in situations which seem appropriate, or inventing phrases such as "I lost my remembering" to mean "I forgot"
- abnormalities in the pitch, stress, rate, rhythm, and intonation of speech

Eight-year-old Adam says "I'll give you a clue" when he means "I need help," and repeats "My name is…" with agitation when he meets a new person, meaning "What's your name?"

2. Limited Receptive Communication

Students with ASD process information differently than their peers do. These differences may include

- attaching little or no meaning to verbal language
- showing little or no interest in conversation
- paying insufficient attention to the speaker

- failing to understand the meaning of words or phrases that are abstract or that have more than one meaning
- taking words and expressions such as "step on it" literally
- focusing on how a message is communicated, rather than focusing on its meaning
- failing to understand sarcasm, teasing, or the subtle changing of the meaning of words by tone of voice
- hearing what he wants to hear; ignoring parts of the message that signal something unpleasant or that require a change in expectations
- misinterpreting non-verbal cues used by others
- failing to coordinate the verbal and non-verbal components of speech
- misunderstanding language involving abstract or imaginary activities

> Eight-year-old Adam, when asked if he liked the parade, says, "I liked the end of the parade," meaning the football game which started after the parade.
>
> Ten-year-old Helen participated in a lengthy class discussion after listening with her classmates to a radio news report about a robbery in which someone had been seen waving a gun. When asked about the radio item following the discussion, she insisted that the person had been waving a flag because "you wave a flag."
>
> Ten-year-old Miranda is distressed when school staff try to discourage her from running for student council. She insists that she can run and win because she knows that she is an excellant runner.
>
> Nine-year-old Justin is going to the park with other children and adults. After 15 minutes of exhaustive preparatory discussion involving words and pictures drawn on the board showing playground equipment and a script for what would happen at the park, Justin collapses in distress on the sidewalk when he realizes the group is not going to the parkade, where he knows his family car is parked.
>
> Nine-year-old Mark is involved in a good listener/bad listener activity. Children have been told that a good listener listens carefully and faces the speaker. When he is asked to identify one way in which another child was a good listener, he says, "because his ear was facing Sam."

3. Limited Expressive Communication

Most students with ASD experience significant delays or difficulties with spoken language. Many will not acquire spoken language. Those who do often use it differently than their typically developing peers. These differences include

- failing to use body language to communicate
- using language in socially inappropriate ways, such as repeating words or phrases without intending to communicate something
- failing to provide non-verbal feedback, such as a head nod or a smile to a speaker
- using associational speech, memorized words, or phrases which the student tries to fit into a particular situation because he cannot phrase language more conventionally

- experiencing difficulty adjusting speech in response to listener feedback, cues of approval, amazement, disbelief, or boredom
- confusing listeners with incorrect use of pronouns
- staying with a conversational topic well past the point of listener interest
- experiencing difficulty with maintaining appropriate loudness, pitch, stress, rate, rhythm, and intonation of speech

In the following examples, each student uses a memorized "chunk" of speech he has heard before because he cannot produce the appropriate language for the situation.

Five-year-old Shaun, walking with his mother, approaches a heavy-set woman. He looks her up and down, then looks at his mother and says, "It's not over until the fat lady sings."

Six-year-old Tim has very poor motor planning and can neither pedal a tricycle nor figure out how to get off. As he sits stuck against a wall he says loudly, "Alright, I've had just about enough of you for one day," a phrase he had probably heard an adult say when frustrated.

Eighteen-year-old Owen writes "I'll follow the sun" (a song title) in order to answer a science question about plants requiring light.

Students with ASD often produce echolalia, the repetition of words, signs, phrases, or sentences spoken or used by other people. Echolalia may be *direct* (the student repeats immediately what someone else has just said) or *delayed* (the student repeats later what someone else said).

Echolalia appears to be a developmental stage in the acquisition of communication and language for some students with ASD, involving a progression from non-verbal to echoic verbalization to spontaneous, creative, non-echoed utterances. Changes in the original echoed utterance, signalled by new words or different intonation, often indicate the beginning of the movement to increasingly creative language use. This changed echolalia is called *mitigated echolalia*.

Echolalia may offer the student a functional means to communicate. For example, in response to the question "Do you want a cookie?" a student with ASD might echo "Want a cookie?" to indicate "yes, please." The repetition by the student of a phrase such as "Sit down and work" might assist in self-regulating behaviour. For these reasons, it is appropriate to encourage and develop the student's use of echolalia.

Nine-year-old Vanessa cannot independently use words to make requests. She approaches her mother and says, "Don't you want to listen to the music?", exactly duplicating her mother's intonation when she has asked Vanessa the question previously.

A note on behaviour and communication: All behaviour communicates, or may have the potential to communicate, information that is important to the student with ASD. When trying to understand the reason for a behaviour, ask yourself: "If this behaviour could talk, what would it be saying?" This means that students who do not develop verbal language may communicate through other means. These may include subtle communication acts that require familiarity with the student to interpret, or direct expressions such as screaming, crying, acts of aggression, or self-injurious behaviour.

Restricted Patterns of Behaviours, Interests, and Activities

Indicators:

1. Restricted Repertoire of Activities
2. Stereotyped and Repetitive Body Movements
3. Persistent Preoccupation with Parts of Objects or Attachments to Unusual Objects
4. Markedly Restricted Range of Interests or a Narrow Preoccupation with One Interest
5. Difficulties with Attention and Motivation
6. Need to Follow Routines in Precise Detail
7. Marked Distress over Changes in the Environment

1. Restricted Repertoire of Activities

Students with ASD are often more oriented to objects than to people, and yet many have a very small repertoire of activities they can enjoy doing with the objects or materials that they like. They may need to be systematically taught to broaden their range of interests and activities so that they can entertain themselves, increase their attention span, improve trial-and-error learning skills, and master activities that will then become vehicles for social interaction.

Five-year-old Luis has ASD and a significant cognitive disability. He seems to have no repertoire of ways to enjoy himself, other than eating. When he is exposed to a large variety of toys and materials, he is observed to watch briefly toys that spin, such as tops and musical bells, even though he doesn't attempt to use them.

He is then taught, using demonstration and hand-over-hand support and a simple script of "push…look," to push on a top and watch it spin. He is praised each time he pushes and offered one piece of sweet cereal as a reinforcer after three pushes. Eventually, when he is being taught to do a new activity, he is offered cereal as a reinforcer, but he pushes it away and points to the top instead.

He has now enlarged (pushing on the top) the repertoire of activities which he can enjoy doing and which can be used as reinforcers to teach new activities.

2. Stereotyped and Repetitive Body Movements

Students with ASD may show "stereotyped" behaviours such as hand flapping, finger flicking, rocking, hand clapping, lunging, and grimacing which compete with purposeful tasks or activities. The desire to perform these movements often seems strongly internally motivated. Attempting to halt them without providing alternatives may lead to other similar behaviours.

Students with ASD may also show abnormalities of posture, such as toe-walking or walking flat-footed rather than using the more typical heel-and-toe movement.

3. Persistent Preoccupation with Parts of Objects or Attachments to Unusual Objects

Students with ASD often develop preoccupations with particular objects (for example, wheels, light switches, string, fans) or sounds, colours, or textures that go well beyond the stage of a simple interest. Again, like the stereotyped and repetitive body movements described above, the internal motivation behind these preoccupations and attachments may be very strong. For example, a student's preoccupation with spinning a toy car's wheels might be more interesting than rolling it along the floor.

4. Markedly Restricted Range of Interests or a Narrow Preoccupation with One Interest

Most students with ASD show an intense interest in a narrow range of objects, activities, or people. In higher-functioning students, these interests often become preferred conversational topics that dominate social interaction with others.

> Eleven-year-old Marcel has chosen John Coltrane as his topic for a classroom project on musicians, and in the process he has developed an intense interest in jazz. Every spontaneous conversation between Marcel and his peers or adults at school is used to relay the latest things he has learned about Coltrane or other jazz "greats," and he is very creative about inserting his topic into apparently unrelated classroom discussions. He also brings tapes so that his teacher can play them during class. He shows no awareness that, while his teacher is charmed, his Grade 6 peers are uninterested at best.

5. Difficulties with Attention and Motivation

Students with ASD often demonstrate a range of unusual patterns of attention that affect communication, social development, and learning. Specifically, they may

- focus attention on one aspect of a situation and ignore the rest. For example, a student may look at the ball but not at the person to whom the ball is to be thrown, or notice an insignificant detail such as a staple in the corner of a paper, but not the information on the paper itself.
- experience difficulty shifting attention from one thing to another
- be unable to sustain attention to people or activities
- fail to attend to information from two sources at the same time
- respond to irrelevant social cues that have caught their attention
- attend to limited portions of a conversation and not understand the intent of the speaker
- not attend to multiple cues in speech and language and so miss important subtleties of the message

> Twelve-year-old Millie, asked to put away coins after a coin-counting task, turns all the coins face down and whispers to herself "the ones with the leaves." She used that cue to discriminate pennies from dimes and nickels, rather than colour as many students would do.
>
> Five-year-old Martin has a parent who is a gemologist, and he is interested in gems and rocks. He appears to pay close attention to a story read by his teacher as he sits on the carpet in front of her. Asked afterward to say what he liked best about the story, he responds, "What a whopper," pointing to the teacher's engagement ring. This left his teacher wondering whether his fascination with gems kept him from paying attention to the story.

Frequently, what motivates students with ASD is different from what motivates their peers. Internal motivators, such as the need to fit in with peer groups or to share experiences, may not be meaningful. Similarly, students with ASD may not find external rewards (or reinforcers) motivating. In fact, students with ASD may not be able to understand or tolerate many things a typically developing student might find rewarding, such as

- physical contact (for example, a light pat or a hug)
- non-verbal signals such as a wink or head nod
- verbal praise
- extra time for social contact
- reinforcers, such as checkmarks, to be exchanged for money or privileges

Students with ASD are typically motivated by highly individual preferences and interests. If these are understood and incorporated appropriately into learning activities, it may be possible to increase the motivation of students with ASD and by so doing, improve their attention.

Seven-year-old Cole reads well and loves books, especially ones new to him. His teacher identifies a selection of books and stores them in a labelled box in the classroom. The books are available to him only for a few minutes after he has worked successfully in math each day.

Seven-year-old Rajinder is motivated by being in control of choices and by being able to photocopy and then complete dot-to-dot pictures. He has a visual schedule reminding him that after he fills in two circles (after completing two tasks), he can choose

1) to go to the office and choose a piece of coloured paper from the colours available from the school supply, or
2) to photocopy a dot-to-dot of his choice from the teacher's workbook

6. Need to Follow Routines in Precise Detail

All students (and adults, too) require a degree of structure, routine, and predictability in their day. Some students with ASD, however, need to maintain highly consistent routines in order to function with any success. Similarly, students with ASD usually perform tasks exactly as they are taught. With thoughtful planning and teaching, this can be a learning strength. Conversely, unlearning one skill and relearning another may require considerable time and effort.

Six-year-old Sharon has learned to follow a picture script for removing and putting on outerwear. When spring arrives and she does not always come to school with snowpants, a hat, or a scarf, she has a tantrum each time it is necessary to dress or undress if the items of clothing matching the pictures are absent.

7. Marked Distress over Changes in the Environment

Seemingly minor changes may provoke strong reactions. Change that might go unnoticed or be welcomed by a typically developing student might lead to distress or a tantrum in a student with ASD. For example, a student with ASD may be distressed if

- seating at desks or tables is rearranged
- bulletin boards are changed
- play materials are removed and replaced with different ones
- different centres are open on different days
- the class uses a different bathroom in the school than usual, or enters through a different door
- gym class occurs outside rather than in the gym
- the classroom teacher stands in a different place than usual to talk to the class
- instead of the usual activity, a special visitor speaks to the class or there is a special assembly

Associated Features of ASD

In addition to the primary characteristics that are central to the diagnosis, associated features are frequently observed in students with ASD, but are not central to making a diagnosis (as are the primary characteristics). Familiarity with these associated features provides a more complete understanding of the individual student with ASD.

Associated features of ASD include

1. unusual responses to sensory stimuli
2. anxiety
3. resistance and anger
4. limited problem solving and independence
5. scattered developmental profile

Unusual Responses to Sensory Stimuli

Students with ASD usually differ from typically developing peers in their responses to sensory information. One or more of their senses may be either hypo-("under")sensitive or hyper-("over")sensitive to environmental stimuli.

The extent to which differences in sensory processing impact the student with ASD varies. Consideration should be given to both the nature of sensory stimulation in the student's environment, and how he responds to it.

Table 1.2: Location and Functions of the Sensory Systems

System	Location	Function
Tactile (touch) 	**Skin** – density of cell distribution varies throughout the body. Areas of greatest density include mouth, hands, and genitals.	Provides information about the environment and object qualities (touch, pressure, texture, hard, soft, sharp, dull, heat, cold, pain).
Vestibular (balance) 	**Inner ear** – stimulated by head movements and input from other senses, especially visual.	Provides information about where our body is in space, and whether or not we or our surroundings are moving. Tells about speed and direction of movement.
Proprioception (body awareness) 	**Muscles and joints** – activated by muscle contractions and movement.	Provides information about where a certain body part is and how it is moving.
Visual (sight) 	**Retina of the eye** – stimulated by light.	Provides information about objects and persons. Helps us define boundaries as we move through time and space.
Auditory (hearing) 	**Inner ear** – stimulated by air/sound waves.	Provides information about sounds in the environment (loud, soft, high, low, near, far).
Gustatory (taste) 	**Chemical receptors in the tongue** – closely entwined with the olfactory (smell) system.	Provides information about different types of taste (sweet, sour, bitter, salty, spicy).
Olfactory (smell) 	**Chemical receptors in the nasal structure** – closely associated with the gustatory system.	Provides information about different types of smell (musty, acrid, putrid, flowery, pungent).

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- **Tactile (or touch):** Touch allows us to perceive and respond appropriately to our environment. Information, such as temperature and pressure, is gathered by the skin through touch and transmitted to the brain and interpreted. We use touch to tell the difference between a dime and a nickel in a pocket without looking, for example, or to register pain. Students with ASD may interpret tactile information in unique ways. They may be tactile defensive and withdraw from touch. They may react strongly to light touch but seem insensitive to pain such as a skinned knee. They may have strong reactions to certain textures of objects, clothing, or food, or may show no reaction at all. Students who are under-sensitive to touch may seek out more sensory input by choosing tight-fitting clothes or clothes with very tight elastic, by wearing their shoes on the wrong feet, by resisting wearing shoes and socks at all, or in other ways.

Six-year-old Tony is easily agitated whenever something soft brushes lightly against his skin. His educational assistant has long hair that occasionally touches his cheek or neck when she works with him. Recently, he has started to show agitation when she comes near him, anticipating (and trying to avoid) the unpleasant sensation on his skin.

- **Vestibular (or balance):** The inner ear contains structures that detect movement and changes in position. Students with ASD may have differences in this orienting system that leave them fearful of movement or with difficulty orienting themselves on stairs or ramps. Some students may actively seek intense movement that vigorously stimulates the vestibular system, such as whirling, spinning, or other movements that typically developing students could not tolerate. The opposite, however, can also be true, and the student may not be successful with activities such as climbing a ladder, somersaulting, or bending at the waist to pick up an object or to put on boots. Some students with ASD may experience little or no difficulty with motor movements or balance.

Temple Grandin is an author who writes from the perspective of someone with ASD. "Spinning was another favorite activity. I'd sit on the floor and twirl around. The room spun with me. This self-stimulatory behavior made me feel powerful. After all, I could make a whole room turn around. Sometimes I made the world spin by twisting the swing in our backyard so that the chain would wind up. Then I'd sit there as the swing unwound, watching the sky and earth whirl. I realize that non-autistic children enjoy twirling around in a swing, too. The difference is the autistic child is obsessed with the act of spinning."

—Grandin, T. "An Inside View of Autism." *High Functioning Individuals with Autism*, 1992: 22

- **Proprioceptive (or body awareness):** Students with ASD may have difficulties knowing how much pressure to use to hold something or someone, or to use a pencil or keyboard. A student with reduced body awareness may stamp his feet as he walks; crash into desks, door frames, or people; or fall hard when sitting on a carpet. Motor planning, the sequencing of motor activities required for such activities as getting on a tricycle or opening a door, may be related to difficulties with body awareness.

- **Visual (or sight):** Some students with ASD cover their eyes to avoid certain lighting or visual effects (such as flickering fluorescent bulbs) or in response to reflections or shiny objects, while others seek out shiny things and look at them for extended periods of time or enjoy moving their heads or moving objects before a light source to produce visual effects.

  A student may have difficulty finding something directly in his field of vision, such as a science book or a pen, because he doesn't pick it out from the background or because motivation is not high enough to support visual concentration; the same student may be able to "Find Waldo" or notice a word or numbers of perseverative interest on the side of a truck a block away.

- **Auditory (or hearing):** Students with ASD may show strong response to sounds. Seemingly insignificant sounds, such as the squeak of a marker on a page or the bubbling of an aquarium, may cause extreme distress. Normally occurring sounds may be experienced as painful or frightening. Students may tolerate loud sounds when they like them or are in control of them (for example, banging a drum) but react catastrophically to a ringing school bell or the buzzing sound of a TV when a video ends. Alternatively, students with ASD may not respond to sounds in their environment and act as if deaf or hard of hearing. One student with ASD may not be able to focus on one sound and screen others, such as listening to the teacher's instructions while other students are talking in groups. Another student may be so focused on an activity that he is oblivious to sounds in the environment, including having his name called loudly.

Seven-year-old Sherry becomes withdrawn and unresponsive at the same times every day in her classroom. Her teacher eventually realizes that Sherry shuts down in anticipation of the sound of the bell ringing and shuts down again to recover from it.

- **Gustatory (or taste):** Some students with ASD can tolerate only a narrow range of tastes and textures in food or drink, making it a challenge to ensure adequate nutrition. This may cause problems with chewing, swallowing, gagging, and regurgitating. Eating things that are not food may also be an issue. Children who are hypo-responsive to taste or require more oral stimulation may seek out strong flavours or very cold materials, or mouth or lick objects.
- **Olfactory (or smell):** Some students with ASD may react to odours from perfumes, deodorants, food or drink, or the chemical residue of classroom cleaning products. Others may use smell in unusual ways to seek out information about their surroundings, such as recognizing a person by smell or having a stereotyped response to a certain smell such as baby powder.

Anxiety

For many students with ASD, school is a stressful place. Anxiety may be expressed in many ways, depending on the student. For some, there may be few visible signs; for others, it may be expressed very directly. There are as many potential causes of anxiety and responses to anxiety-producing situations as there are individuals. Although anxiety is not identified in the *DSM-IV-TR* criteria, many students with ASD (and their parents and teachers) frequently identify anxiety as a potential cause of learning and behaviour difficulties.

Nine-year-old Kelly is distraught when he is not able to spell a word correctly and begins to lose control. When an adult quickly tells him that "that word is at least a Grade 6 word, and no one would expect a boy in Grade 4 to be able to spell it," he says, "You mean it's OK if I can't spell it? Are you sure?" With several more reassurances, he is able to return to the activity.

Eleven-year-old Michael is told he can choose a game to play with a school clinician after a session of work. He looks at various games but can't choose, telling the clinician that he isn't sure in which game he can be the winner, and that he can't play a game unless he's sure he can win.

Eight-year-old Marni was non-verbal as a younger child, but has begun to use words well. She has always strenuously resisted efforts by parents or school personnel to take her outside in the winter. She is heard one day to say quietly to herself, "It's OK, the trees won't really poke your eyes out."

In the first two examples, the student's perfectionism and need for control causes anxiety and emotional upset or resistance. In the third, the student's anxiety and resistance is caused by fear which she can't explain in words.

The student with ASD may be anxious because he

- may not be comfortable and bonded with a significant adult, or may be over-dependent on the presence of one particular adult
- may have specific fears he can't communicate
- can't communicate successfully or can't understand other people's communication
- relies on particular visual or routine cues which are absent or changed
- may be stressed by an unpleasant sensory aspect of the environment, or by anticipating something unpleasant, such as a school bell ringing, noise and jostling in the hallway, or overwhelming smells in the art room or lunchroom
- may be unsure of the routine and doesn't know what to expect next
- may not be able to do a particular task, or may recognize the task as something with which he was previously unsuccessful, or may not know what "finished" is
- knows from experience that he gets over-stimulated in a particular

Temple Grandin describes the example of the squeeze chute which she constructed to ease her feelings of anxiety. "Children have to be taught to be gentle. Since I missed out on this, I have to learn it now. The squeeze chute gives the feeling of being held, cuddled and gently cradled in Mother's arms."

—Grandin, T., and M.M. Scariano. *Emergence: Labeled Autistic*, 1986: 105

setting or activity and is afraid of not being able to calm down or of other people's negative reactions

- is distressed at having to leave a task before it is completely finished

Difficulty in any or all of these areas may lead to unmanageably high levels of anxiety. The typical result, however, is a decreased ability to pay attention, learn, communicate, and function optimally.

Resistance and Anger

Many of the natural reinforcers available to typically developing students are not accessible to students with ASD. Social interaction may be a constant source of stress because the student sees no need for interaction, or because he has a high drive for social interaction but no skills to connect with peers. Learning may be difficult and a pervasive source of low self-esteem. A student may resist task expectations because he does not understand them and cannot communicate his confusion, or because he fears that he cannot be perfect, or because the emotional and intellectual effort does not seem worthwhile. Students may resist passively by shutting down, or explosively with verbal or physical aggression.

> Fourteen-year-old Charles, seen by school staff as not working to his potential, refuses all assignments geared to his ability level as "baby work" and refuses grade-level work as "too hard." He is prepared to spend all of every school day sitting with his arms folded and glaring at people who try to engage him in tasks or in conversation. He lashes out physically at adults who persevere.

Limited Problem Solving and Independence

Problem solving is often difficult for students with ASD. Whether the problems are interpersonal, organizational, or academic, problem solving involves skills of interpreting information, attending to some elements but screening out others, planning, organizing, and sequencing. These are weak areas for many students with ASD.

Students who have learned to rely on and to enjoy adult assistance may resist expectations of independence, whether in problem solving or in task completion. Some students become skilled in using passive problem-solving styles, communicating a need for help to adults by doing nothing or by looking distressed.

Scattered Developmental Profile

The developmental profile of students with ASD is typically scattered (or uneven). A student with ASD may also have a cognitive disability (or mental retardation). A cognitive disability, like ASD, may range from mild to severe and have a significant impact on a student's ability to learn.

Learning involves many interrelated and overlapping skills. The challenges with social interaction and communication described previously will have a significant impact on learning, as will a student's attention, responses to sensory stimuli, and anxiety. As a result, students with ASD learn and function differently than their peers do.

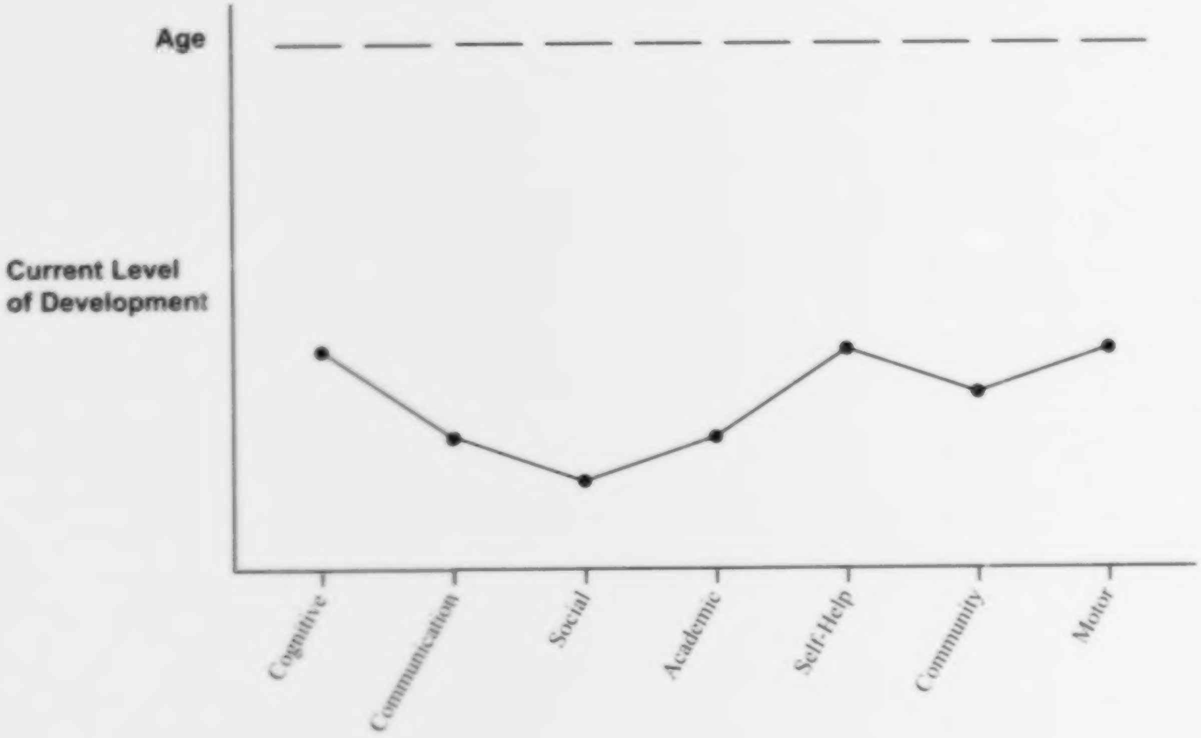
> "When you've worked with one child with autism, you've worked with one child with autism."
>
> —Brenda Smith Myles

The following developmental profiles of three hypothetical students with ASD illustrate how students with the disorder may develop differently. The line across the top of the profile represents the student's chronological age. Developmental domains are listed along the bottom line. The circles represent the current level of development for the hypothetical student.

The circles that are closer to the student's age line represent areas of relative strength. The circles that are farther away from the age line represent areas of relative weakness. It is important to identify areas of relative strength and weakness. The student's strengths can be used to develop areas of weakness.

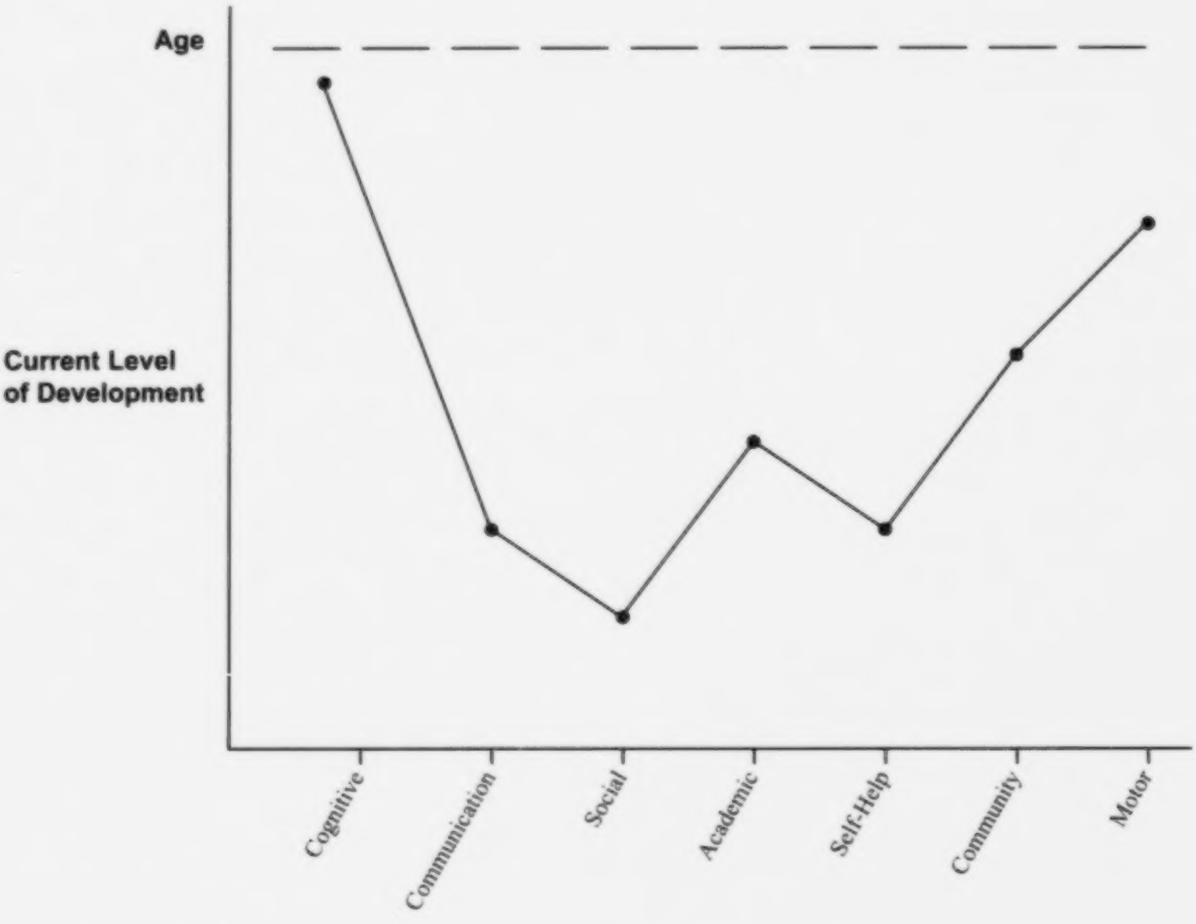
Student A has a diagnosis of ASD and cognitive disability. The scattered developmental profile shows the deficits of ASD as well as the overall delay caused by the cognitive disability.

Student A: Hypothetical Profile of a Student with ASD and a Cognitive Disability



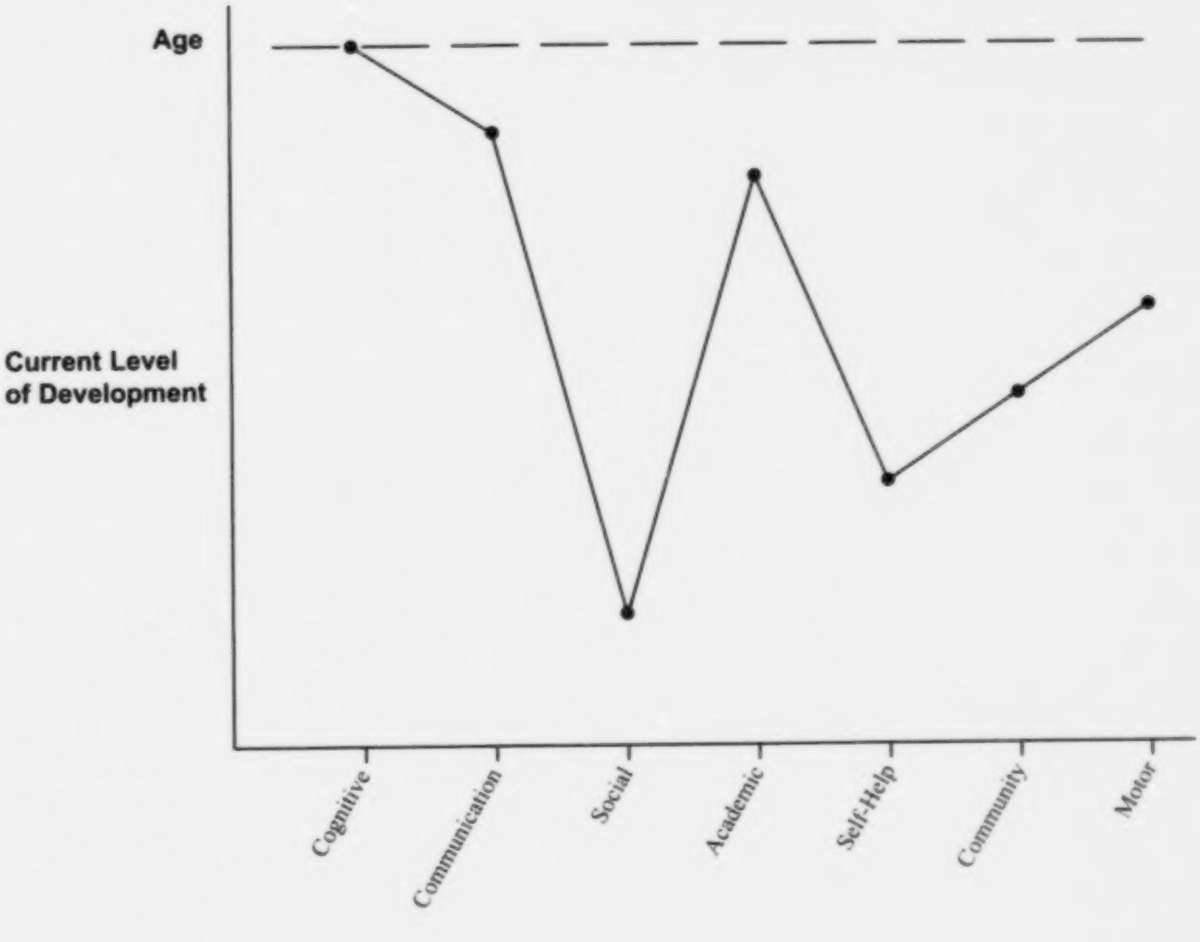
Student B has a diagnosis of ASD. The developmental profile shows the deficits in the primary characteristics of ASD. Other developmental domains, however, show near-normal development (including the cognitive domain). This type of developmental scatter is found frequently in students with ASD.

Student B: Hypothetical Profile of a Student with ASD



Student C has a diagnosis of Asperger's Syndrome. The developmental profile shows normal or near-normal development in cognitive and communication skills, and scattered development among the other domains, particularly in social skill development.

Student C: Hypothetical Profile of a Student with Asperger's Syndrome



Understanding the unique learning profile of individual students is central to developing an appropriate educational plan. Many students with ASD, for example, can more easily learn and remember information that is presented in a visual format. Students who have difficulty comprehending verbal information often follow directions successfully when they can see the information in written or visual form.

Some higher-functioning individuals may demonstrate reading skills by identifying words, applying phonetic skills, and knowing word meanings. They may demonstrate strength in certain aspects of speech and language, such as sound production, vocabulary, and simple grammatical structures, and yet have significant difficulty carrying on a conversation and using speech for social and interactive purposes. They may perform computations on paper with ease but be unable to solve mathematical word problems.

Students with adequate language comprehension and strong visual and rote memory skills may learn basic academic skills and appear to comprehend written material in the first few years of school. In Middle Years, as language, concepts, and social interaction become more complex and abstract, they may begin to experience great difficulty. This may be especially troubling for a student who sees being smart and doing well as an essential part of his identity, and confusing for teachers and parents who have not realized how much the student has relied on a strong memory and a good vocabulary to succeed.

Most students with ASD perform new skills exactly as they have been taught. Often, students learn the task without understanding how changes in setting might influence their performance of the task. This is known as difficulty with generalizing the new skill. It occurs when students are unable to understand differences and similarities between settings, and how this guides them in using their skills. A student who has been taught to use the toilet at home, for example, may not use the toilet at school because it looks different. A student who has learned to remove his shoes when entering his home may remove his shoes when entering other buildings, even if it is not required.

It is important to know the student's areas of strength and weakness. Students with ASD will show weakness in social and communication development. They may have a cognitive disability. They may also show areas of strength that are often associated with ASD. Typical areas of strength and weakness are listed in Table 1.3.

Table 1.3: Typical Areas of Strength and Weakness in Students with ASD

The ability to:

- Take in chunks of information quickly—the whole thing
- Remember information for a long time
- Learn to use visual information meaningfully
- Learn and repeat long routines
- Understand and use concrete, context-free information and rules
- Concentrate on narrow topics of specific interest

Predictable Personality Traits

- Perfectionism; honest, naive, and overly compliant

An inability or decreased ability to automatically, consistently, and/or independently:

- Modulate and process or integrate sensory stimulation
- Control attention, scan to identify, and focus on important information (overfocuses on irrelevant details)
- Analyze, organize, and integrate information to derive meaning (memorizes details, rote responses, and rules rather than concepts)
- Retrieve information in sequential order (interferes with learning cause/effect relationships and ability to predict and prepare for future events)
- Perceive and organize events in time and understand language related to time (leads to confusion and time-related anxiety)
- Understand the complex and changing meanings and nuances of the language (understands and uses the language literally)
- Integrate auditory information efficiently (leads to delays in response time and information gaps)
- Generate alternatives or solve problems that involve hypothesis testing and social judgment (often repeats the same responses over and over)
- Modify or generalize information from one situation to another (learns and uses concepts and skills exactly as taught)
- Control thoughts, movements, and responses (perseverates and gets stuck in motor and verbal routines or responses; may seem driven and compulsive)
- Adjust to new or novel information and events (leads to extreme anxiety associated with change and trying new things)
- Initiate communication to ask for assistance or clarification (leads to confusion, frustration, anxiety, and ineffective behavioral responses)
- Perceive social/cultural rules and the perspective of others (leads to confusion, misunderstandings, and unexpected and ineffective responses)

In summary, those with autism are unable to independently integrate bits and pieces of information to make meaning, to expand, or to use information flexibly.

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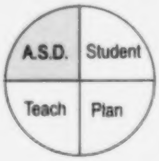
A.S.D.
Student
Teach
Plan

At this stage, the team is familiar with the

- ☐ primary characteristics of ASD
- ☐ associated features of ASD
- ☐ general instructional implications of ASD

CHAPTER 2:

THE STUDENT WITH AUTISM SPECTRUM DISORDER

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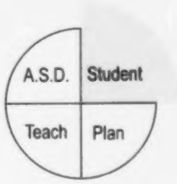
CHAPTER 2: THE STUDENT WITH AUTISM SPECTRUM DISORDER



The purpose of Chapter 2 is to describe the roles and responsibilities of the team and the process of developing a student profile. Knowing the primary characteristics and associated features of ASD prepares the team for learning how individual students are affected by ASD. A student profile is a summary of what is known about the student, what needs to be known, and what priority learning needs will guide the development of an Individual Education Plan (IEP).

The diagnosis of ASD is only the starting point: it confirms the student displays the distinctive pattern of characteristics (described in Chapter 1) that are associated with ASD. A diagnosis does not, however, describe the individual personality, temperament, interests, and areas of strength and weakness that make a student unique. For that, the team must gather and share information about the student and create a student profile that identifies the student's priority learning needs.

Team members are encouraged to think about the student's learning priorities at all stages of the assessment, evaluation, and planning process. Appropriate educational programming depends on a meaningful and functional IEP. This will facilitate the development of outcomes the entire team supports.

The Student Profile

What Is a Student Profile?

A student profile is a summary of what the team knows about a student, including current and historical information (such as previous assessments and academic achievement). It identifies priority learning needs that guide the team in determining appropriate educational programming options and developing the student's individual plan.

All students—with or without ASD—are different from one another. Students differ in temperament and personality, in motivation, in learning style, in attention span and distractibility, in intelligence and adaptive skills, in motor development, and in many other unique and personal ways. Students with ASD differ from their typically developing peers because they have ASD and because they are individuals in their own right.

A student profile describes the unique development of an individual student. This is critical for appropriate programming education because

- the characteristics of ASD will vary among students
- the characteristics of ASD in an individual student are variable and will change over time
- other individual characteristics that are not directly associated with ASD (for example, cognitive function) must be described

A student profile includes

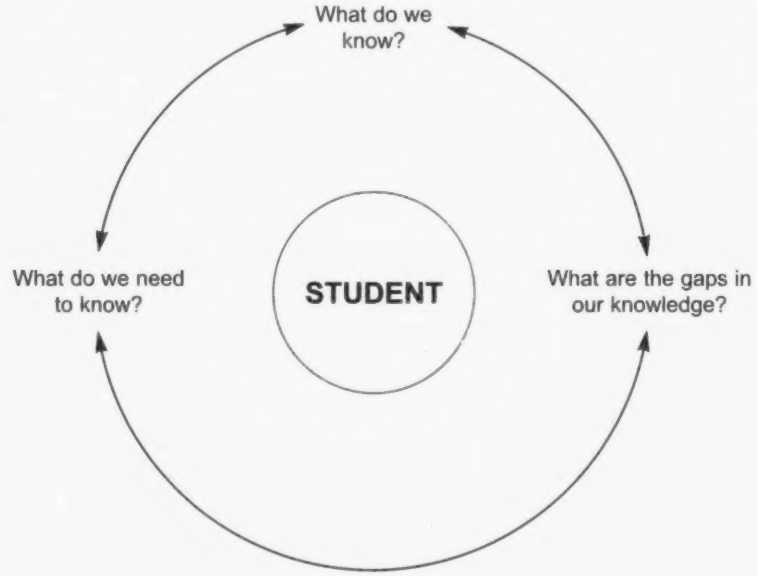
- history and background information
- a summary of diagnostic and assessment information
- a summary of interests, strengths, and learning styles
- information about current level of development, including the primary characteristics and associated features of ASD
- priority learning needs

The Process for Developing a Student Profile

The process for developing a student profile involves

1. **Gathering information.** The team compiles current information about the student, identifies gaps in current knowledge, and determines the information necessary to prepare the student profile. Team members assess the student according to their area of expertise.

   Gathering information involves the questions:



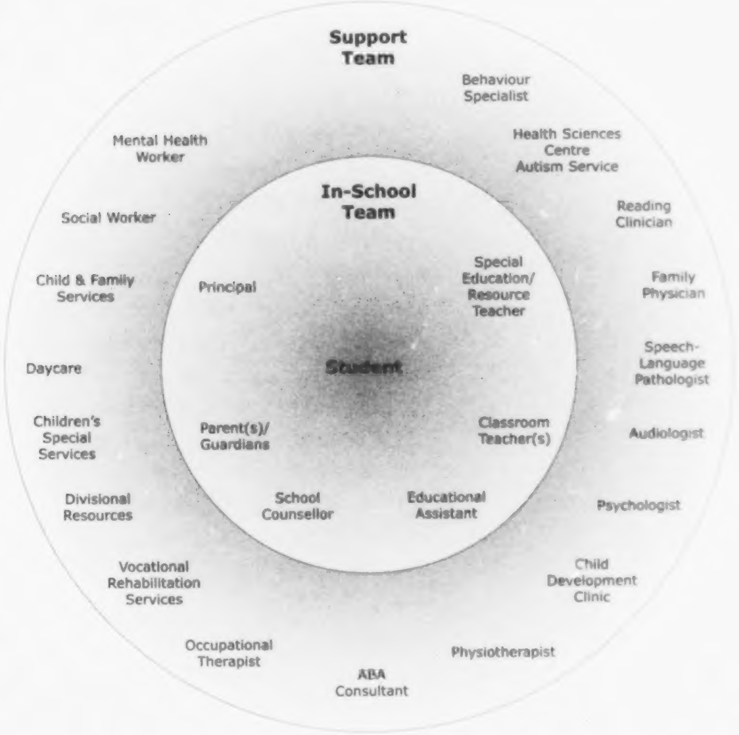
2. **Sharing information.** When team members complete their assessments, they share the results with the rest of the team. This allows the team to create a more complete profile of the student.
3. **Creating the student profile.** A student profile summarizes what is known about the individual student, including formal and informal assessment information, and identifies priority learning needs that guide the development of the IEP.

When the student profile process is completed, the team will have the information it requires to make decisions about appropriate educational programming for the student.

The Team

The student's profile and the resources available in the school or division determine who is on the team. A typical team includes

- a case manager
- an in-school team, whose members are responsible for planning and day-to-day decision making
- a support team which consults with the in-school team on the development and implementation of the educational plan


Support Team
Behaviour Specialist
Health Sciences Centre Autism Service
Reading Clinician
Family Physician
Speech-Language Pathologist
Audiologist
Psychologist
Child Development Clinic
Physiotherapist
ABA Consultant
Occupational Therapist
Vocational Rehabilitation Services
Divisional Resources
Children's Special Services
Daycare
Child & Family Services
Social Worker
Mental Health Worker
In-School Team
Special Education/ Resource Teacher
Classroom Teacher(s)
Educational Assistant
School Counsellor
Parent(s)/ Guardians
Principal
Student

The Case Manager

One of the first tasks of the team is to identify a case manager and assign specific roles and responsibilities to each team member. The case manager oversees the work of the team. It is critical that a case manager be identified early in the process.

In most instances, case managers are responsible for

- distributing a written and timed agenda prior to meetings
- maintaining contact with parents
- organizing and chairing meetings
- coordinating development of the educational plan
- ensuring that a process to monitor progress and achievement is established
- documenting and distributing revisions to the plan
- ensuring meeting records are kept and distributed
- facilitating group decision making
- initiating and maintaining contact with external agencies

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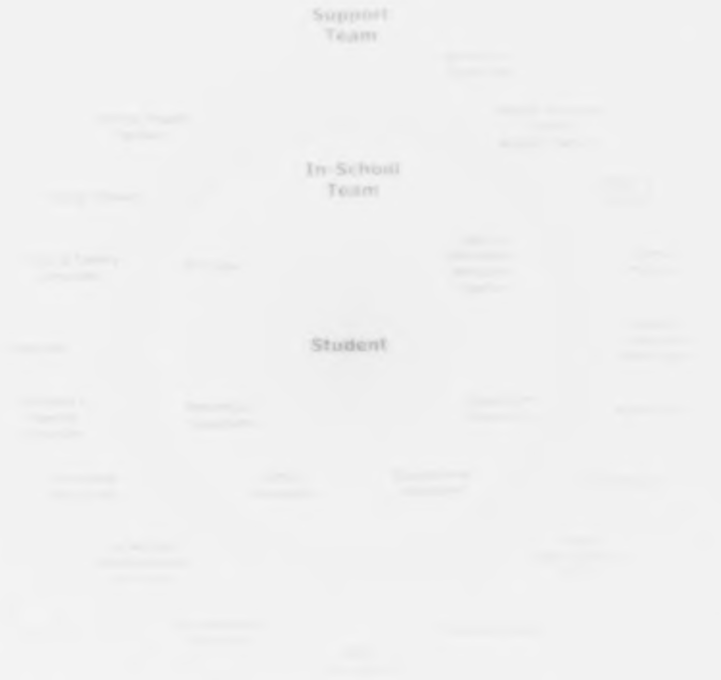

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- ensuring meeting records are kept and distributed
- facilitating group decision making
- initiating and maintaining contact with external agencies

The In-School Team

The in-school team consists of the student, parents, and school staff. The members of this team are the key decision makers in the planning process.

Student

The student profile is the foundation for individual planning and should reflect the student's priority learning needs, strengths, weaknesses, interests, etc. A student who is able to participate as a team member can be involved by expressing individual preferences and interests and by participating in a discussion about strategies and behaviours.

A student who would not benefit from participating in planning meetings can be involved in other ways. For example, a student may provide information about his choices and preferences for activities and potential reinforcers. Following a meeting, ensure that the student understands

- the purpose of the educational plan
- how the outcomes of the educational plan will help him to attain personal goals

Parents

Parents are advocates for their child's best interests. It is essential that parents have opportunities to be full and equal partners in the planning process. Parents contribute invaluable information about the student's learning approaches and interests, and about ways to avoid potential problems. The information they provide helps ensure continuity in programming. Parents also play an important role in reinforcing the goals of the IEP at home. Enlisting parents as active members of the team contributes to an effective IEP.

Information about building partnerships between families and schools may be found in *Working Together: A Handbook for Parents of Children with Special Needs in School* (2004). It may be obtained online at <www.edu.gov.mb.ca/metks4/specedu/documents.html> or from the Manitoba Text Book Bureau: toll-free 1-866-771-6822 or <www.mtbb.mb.ca>.

School Staff

While the staff members on the school team vary from student to student, the typical in-school team includes the classroom teacher, the principal or a designate, the resource teacher, the guidance counsellor, and/or educational assistants who will assist in implementing the plan.

It is important to note that the classroom teacher retains primary responsibility for the student's learning. Students with IEPs remain part of the classroom and school community.

It is also important to note that the principal is responsible for the overall work of the team and for allocating resources and supports in the school, in accordance with the policies of the school division and Manitoba Education, Citizenship and Youth.

The Support Team

The support team includes professionals who may be asked to consult with the in-school team when specialized input is required. In Manitoba, there are a number of potential sources for support team members. For a current summary, consult the Manitoba Education, Citizenship and Youth website in the box below. The in-school team, which is responsible for making decisions about developing and implementing programming, may call upon members of the support team to assist with

- developing the student profile
- assessing the student
- planning
- selecting and implementing instructional strategies
- providing technical assistance and advice about materials and resources
- accessing community-based resources (if necessary)
- providing input into other aspects of programming (as required)

Please see the Manitoba Education, Citizenship and Youth website for a summary of possible supports to the in-school team: <www.edu.gov.mb.ca/ks4/specedu/aut>

It is important to note that the role of support team members is to provide information that allows the in-school team to make appropriate decisions about the student's programming. The in-school team, including the parents, determines who will be on the support team. Once involved with the in-school team, the members of the support team will have a shared responsibility in providing information to the in-school team for making programming decisions.

Developing the Student Profile

Before the Team Begins

Before they begin, team members should consider

1. roles and responsibilities
2. priorities in profile development
3. student-specific and environmental factors

1. Roles and Responsibilities

Team members gather information in relation to their areas of expertise, professional training, or experience with the student. It is helpful to identify who will do what.

Table 2.1 outlines areas of focus in student assessment typically assigned to team members.

Table 2.1: Primary Focus of Assessment

Team Member	Primary Focus in Student Assessment
Classroom Teacher	• academic performance • learning styles and strategies • attention span • interests
Educational Assistant	• collect information and student data under direction of team
Occupational Therapist	• performance in areas of self-care, productivity, and leisure • fine and gross motor skills • functional and social communication • organization • sensory function • social communication and interaction skills
Parent(s)	• developmental history, previous assessments • profile of functioning at home and in community • information about interests, fears, what works, what doesn't
Physical Therapist	• movement and physical function • muscle strength and function • posture • balance • mobility
Psychologist	• cognitive function • learning styles and strategies • adaptive skills and performance • mental health • behaviour • organization • attention span
Resource Teacher	• academic performance (formal) • learning styles and strategies • behaviour • interests • basic motor skills • adaptive skills and performance
Speech-Language Pathologist	• speech • language comprehension and expression • functional communication • augmentative and alternative communication • social interaction and skills
Student	• information about personal interests, fears, perspectives, etc. (as appropriate)

Please note: The areas of assessment identified in Table 2.1 are not intended to be exhaustive or exclusive. They are intended to serve as a starting point for determining assessment roles and responsibilities.

2. Priorities in Profile Development

In planning its approach to the development of the student profile, the team should determine how to gather information concerning

- the **primary characteristics** and **associated features** of ASD described in Chapter 1
- **Cognitive development:** A student with ASD may also have a cognitive disability (or mental retardation). A cognitive disability, like ASD, may range from mild to severe and have a significant impact on a student's ability to learn.
- **Adaptive skill development:** Many students with ASD may be limited in how they use their adaptive skills (for example, fine and gross motor, self-help, recreation, vocational, and community) in functional and meaningful ways.
- **Academic achievement:** A student with ASD may demonstrate "splinter skills" (an isolated area of developmental strength) that hide areas of weakness. For example, a student may be able to read fluently but not understand what he is reading.
- **Work done by other professionals:** A student may have been seen for diagnosis or testing by other professionals (for example, hearing, vision, dental, or medical). This information needs to be included in the student profile.

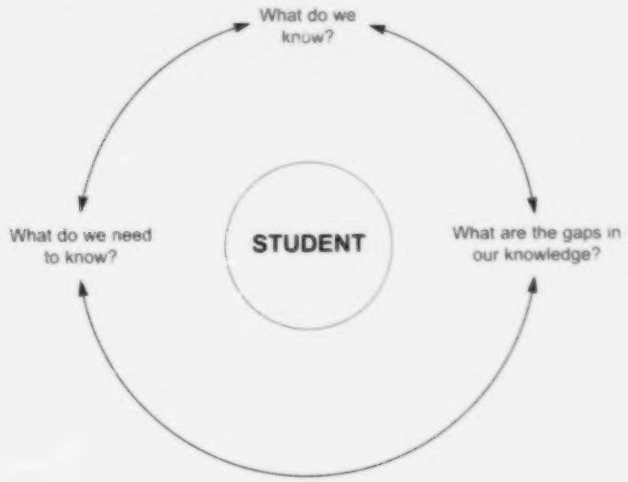
3. Student-Specific and Environmental Factors

The behaviour and performance of students with ASD during testing will vary according to personal and environmental factors. For example, impulsiveness, distractibility, fatigue, etc. will influence results. The student's surroundings (for example, noise, movement, light, etc.) may also affect performance.

Developing the Student Profile

☐ Step One: Gathering Information

Gathering information involves the questions:



If the student is new to the school, the team will need to allocate more time to developing a student profile than it would for a known student. With a known student, the logical place for the team to begin the information-gathering process is with the previous student profile it created for the student. This will provide continuity to the work of the team (for example, by identifying previously successful instructional strategies, situations that may lead to challenging behaviour, etc.) and save time by avoiding duplication.

There are many potential sources of information, including family and care givers; school and resource files; clinical files (from school clinicians and support team members such as doctors, dentists, etc.); the previous IEP; and reports from previous teacher(s). Young children entering school for the first time may have a Transition Action Plan with potentially useful developmental information.

Gaps in the team's current knowledge will determine the information the team needs to gather. Table 2.2 provides a tool for the team to organize the information-gathering process.

Table 2.2: Information-Gathering Checklist

Area	To Do	Who	Notes	Done
Primary Characteristics				
Social				
Communication				
Repetitive Patterns of Behaviour, Interests, and Activities				
Associated Features				
Sensory				
Anxiety				
Resistance/Anger				
Problem-solving/ Independence				
Approaches				
Other				
Hearing				
Vision				
Medical				
Dental				
Cognitive/Adaptive				

This checklist is available in Appendix: F: Forms.

Formal testing is often considered the primary means of assessing students. However, informal assessments also provide useful information. Together, formal and informal assessments provide a range of approaches to assess a student with ASD. It may not be possible to use formal measures with some students with ASD, but it is always possible to gather some information using informal measures.

Formal assessment with norm-referenced, standardized tests offers an opportunity to compare an individual student to similar students in a normative group. This provides a means to measure a student's individual development and determine the nature and severity of delays. Repeating the test at a later date offers a way to measure development over time.

Please note: Certain measures, such as an Intelligence Quotient (IQ), do not typically show change over time. If the goal is to track student change over time, formal measures of adaptive development may be more appropriate.

Examples of formal assessment tools:

- The Weschler Intelligence Scale for Children – IV (WISC – IV)
- The Vineland Adaptive Behavior Scales (VABS)
- The Scales of Independent Behaviour (SIB-R)
- The Peabody Picture Vocabulary Test – III (PPVT-III)
- The Gilliam Autism Rating Scale (GARS)

Informal testing covers a wide range of approaches and offers a highly adaptable and flexible way to gather information about a student. Informal testing complements formal testing, providing information about individual student function. It also offers an alternative way to assess students for whom formal testing is not appropriate.

Informal assessment measures may be

- criterion-referenced
- teacher-made
- clinician-made
- interviews
- observation

Criterion-referenced assessment

Criterion-referenced assessment compares the performance of the student to a pre-set standard. There is no comparison to other students, as in formal testing. Criterion-referenced assessment is useful for planning instruction, measuring progress, and determining when an outcome has been met. When documenting student progress in a student's IEP using student-specific outcomes (SSOs) and Performance Objectives (POs), the team is using criterion-referenced assessment.

Examples of criterion-referenced assessment tools:

- Psycho-educational Profile – Revised (PEP-R)
- Evaluating Acquired Skills in Communication – Revised (EASIC-R)
- Assessment of Basic Language and Learning Skills (ABLSS)

Teacher-made

Teacher-made tests may be used in combination with many other assessment tools to determine what students have learned and what knowledge and skills still need to be learned.

Clinician-made

Clinician-made tests evaluate skills or abilities in settings where the student uses them, such as the school, home, or community. These tools offer the clinician more flexibility (in setting, prompting, responding, etc.) than do formal measures and provide a more complete picture of the student. They may also be used to collect baseline information and to measure student skill development over time.

Interviews

Interviews involve asking questions relevant to the student and his circumstances. Family members, school staff, community members, and the student are potential interview candidates. The interviews may be open-ended or structured to a degree that suits the participants and the situation.

Observation

Observation of the student in one or more settings provides a wealth of information about the student's skills and interests, approaches to learning, and other behaviours. Observation is also important in understanding what might trigger or maintain challenging behaviour.

There is a difference between making observations and acting as an observer. People make numerous passing observations as they work with students throughout the day. Acting as an observer, however, means noticing, remembering, and systematically recording events and behaviours to answer a specific question.

See Appendix D: Autism Spectrum Disorders Inventory for an observation framework that offers a thorough exploration of the primary characteristics and associated features of ASD.

For instance, if a team identifies "increased independence" as a potential priority learning need, team members may choose to observe the student for a period of time, in a variety of settings, to determine factors such as

- how independently the student does activities now (i.e., responds to natural cues or verbal prompts)
- the student's existing approach to problem-solving and his ability to generate alternate strategies

Using a common observation framework gives team members a means to compare and discuss their perceptions, regardless of their discipline, role, or observational setting. Depending on the team, the process of observation may take a variety of forms and be completed over varying lengths of time.

Examples of interview/observation assessment tools:

- The Childhood Autism Rating Scale (CARS)
- Autism Diagnostic Interview – Revised (ADI-R)
- Autism Diagnostic Observation Schedule – Generic (ADOS-G)
- Checklist for Autism in Toddlers (CHAT)
- Modified Checklist for Autism in Toddlers (M-CHAT)

Developing the Student Profile

☐ Step Two: Sharing Information

After gathering information, team members meet to discuss what they have learned about the student. Typically, this involves providing a summary and evaluation of the gathered information.

This stage allows the team to create a picture of the student that is more complete than any one individual could create alone. It is crucial that everyone, including the parents and (when possible) the student have an opportunity to share information in a meaningful way. Not only does this add to what is known about the student, it also provides a foundation for building consensus around programming decisions later.

Teams should be alert to barriers to parent participation and attempt to find solutions. Cultural differences, work schedules, and other family obligations should be considered. When potential barriers to participation are removed, the student will benefit from the perspectives of everyone on the team.

When sharing information at a team meeting, it is helpful to

- avoid jargon
- base discussion on facts
- use examples to convey key points
- avoid making assumptions
- be brief

Developing the Student Profile

☐ Step Three: Creating the Student Profile

The process concludes with the creation of the individual student profile. The profile provides a concise summary of what the team knows about the student and identifies priority learning needs.

A student profile includes

1. history and background information
2. a diagnostic/assessment summary
3. a summary of interests, strengths, and learning styles
4. current level of development
5. priority learning needs

Items 1 to 4 summarize the information the team has gathered and shared. The team uses this information to determine the student's priority learning needs. The student profile is complete when a manageable number of priority learning needs have been agreed upon.

In general, students with ASD are oriented to objects rather than people and have few ways to explore, play, and learn spontaneously. They often have restricted or perseverative interests and tend to resist anything "new." Priority learning needs should address the student's difficulty relating to people and to objects in the environment, as well as the student's limited repertoire of activities.

A priority learning need identifies a general area of development (for example, communication or social skills) that requires a specific focus and attention in the student's individual plan. It often reflects the primary characteristics and associated features of ASD.

Because it is general, a priority learning need covers a longer time span (three to five years) than the student-specific outcomes (one year) and performance objectives (six to eight weeks) in an individual plan.

Examples of possible priority learning needs are identified in Table 2.3. These examples

- are not exhaustive
- are intended to provide the team with a starting point for determining priority learning needs
- are not student-specific outcomes or performance objectives

The team should attempt to agree upon a manageable number of priority learning needs.

Table 2.3: Examples of Priority Learning Needs

Primary Characteristics	
• Comprehend spoken/written language • Produce spoken/written language • Converse with peers and adults • Use Augmentative/Alternative Communication (AAC) • Play with peers • Play independently (with toys or objects)	• Participate with peers in social activities • Develop and expand interests and activities • Use accommodations to follow routines and complete activities • Focus attention on priority learning activities • Respond flexibly to demands of different environments
Associated Features	
• Solve problems • Accommodate to a variety of sensory input • Function with greater independence	• Manage stress • Recognize difficult situations and seek assistance • Manage anger
Other	
• Follow classroom rules and routines • Work with greater independence • Organize and complete tasks • Manage own behaviour	• Manage self-care needs (for example, dressing, eating, hygiene) • Function in home and community • Participate in instruction • Act safely in a variety of settings

In reaching agreement on priority learning needs, it is helpful to

- encourage participants to think about learning priorities before the meeting
- allow everyone an opportunity to participate
- list the learning priorities as they are identified

In looking for consensus on learning priorities, ask whether the priority learning needs being considered will lead to student-specific outcomes and activities that

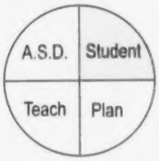
- ☑ promote inclusion
- ☑ can be used in more than one setting or situation
- ☑ can be used now and in the future
- ☑ are likely to result in functional skills for the student
- ☑ promote independence
- ☑ create opportunities for meaningful contact and interaction with peers, family, and community members
- ☑ improve communication
- ☑ improve the student's life at home and in the community
- ☑ match the student's learning strengths and interests
- ☑ promote generalization

(Adapted from Falvey, M.A. *Community-Based Curriculum*. 2nd ed., 1989: 41-43)

If the team is unable to agree on priorities for student learning at this point, the process of writing the IEP will be difficult. And, as the daily planning for the student depends on a meaningful and functional IEP, it is important that the IEP have outcomes the entire team supports.

While agreement is the goal, it may not always be attainable. However, disagreement offers an opportunity for team members to explore and gather additional information. To accomplish this, the team might

- do further observation
- consider additional assessment (formal or informal)
- involve a person from outside the team to provide a fresh perspective



At this stage, the team is familiar with the process to

- ☐ identify a case manager
- ☐ agree on roles and responsibilities
- ☐ gather and share information
- ☐ create a student profile
- ☐ identify a manageable number of priority learning needs

Vignette: Ricky

Developing the Student Profile

This vignette traces the work of a team to assess Ricky, a young student with ASD, and develop his student profile.

- ☐ **Step One:** Using the Information-Gathering Checklist (Table 2.2), the team reviews available information, identifies gaps in knowledge about the student, and determines the information that needs to be gathered.
- ☐ **Step Two:** Using the checklist as a guide, the team maps out what they know and what they need to know. They also agree upon how this information will be gathered and who will do it.
- ☐ **Step Three:** After sharing information, the team develops the student profile. The profile summarizes the information gathered and identifies Ricky's priority learning needs.

Vignette: Ricky

(Early Years)

Ricky was diagnosed at the age of three with Autism Spectrum Disorder and developmental delay. He has been attending daycare for two years and will be entering Kindergarten at Maple Elementary School in September at the age of five.

A transition meeting was held at Maple Elementary School in May. The meeting was attended by the Kindergarten teacher, school principal, resource teacher, speech-language pathologist, occupational therapist, the director and the special needs worker from Ricky's daycare, and Ricky's mother. Prior to the meeting, the Kindergarten teacher and resource teacher had observed Ricky in his daycare placement, and the school support team had received the Early Years Transition Planning Inventory which Ricky's mother and the daycare staff had completed.

Ricky lives with his mother and two older siblings, who are both under ten years of age. Ricky is a large, physically active child who enjoys playing with toys that move and spin and at the sand and water tables. At home he spends much of his time watching his cartoon videos; he also spends a lot of time lining up small objects on his window sill.

Ricky's mother reported that he is beginning to use single words and that he appears to understand a small number of words for certain foods and activities. He usually takes his mother by the hand to get what he wants. The special needs worker at the daycare noted that he does the same at daycare, but would repeat some requesting phrases when prompted. Socially, Ricky prefers to play alone and avoids other children. He will repeat his favourite activities for up to 45 minutes and resists being redirected. He does not appear to be bothered by loud noises. He is a good eater, but will occasionally take food from other children. Toilet training is almost complete.

Additional issues for team involvement include Ricky's mother's need for

- appropriate before- and after-school and summer care for Ricky and her other children
- assistance in managing Ricky as he becomes bigger physically
- assistance in managing sibling conflicts

☑ **Step One:**
Reviewing available information, identify gaps in knowledge, and determining what information needs to be gathered

Information-Gathering Checklist

Area	To Do	Who	Notes	Done
Primary Characteristics				
Social	✓	*Daycare staff* *Resource Teacher* *Kindergarten Teacher*	*Solitary play; tends to avoid other kids*	
Communication	✓	*Speech-language pathologist* *Mother* *Daycare staff* *Kindergarten Teacher*	*Beginning to use words*	
Repetitive Patterns of Behaviour, Interests, and Activities	✓	*Resource Teacher* *Mother* *Daycare staff*	*Lines up small objects* *Shakes fingers rapidly when redirected*	
Associated Features				
Sensory			*No current concerns*	
Anxiety	✓	*Mother* *Daycare staff* *Kindergarten Teacher* *Resource Teacher*	*Resists redirection by shaking fingers and vocalizing*	
Resistance/Anger	✓	*Mother* *Daycare staff* *Kindergarten Teacher* *Resource Teacher*	*Same reaction as for anxiety*	
Problem-solving/ Independence	✓	*Occupational Therapist* *Mother* *Daycare staff*	*Toilet training almost complete. Just how big a priority is it right now?*	
Approaches	✓	*Kindergarten Teacher*		
Other				
Hearing			*Testing completed: No current concerns*	
Vision			*Testing completed: No current concerns*	
Medical			*Recent visit to doctor: No concerns*	
Dental			*Had dental checkup 4 months ago: No current concerns*	
Cognitive/Adaptive	✓	*Psychologist* *Kindergarten Teacher* *Resource Teacher* *Mother*	*Mother will get copy of developmental assessment*	

☑ Step Two:
What the team knows and will need to know

	Gathering Information			
	What Do We Know?	**What Do We Need to Know?**	**How Will We Find Out?**	**Who Will Do It?**
Primary Characteristics				
Social	– prefers solitary play – avoids other children – can play in parallel with adults but not peers	– how will Ricky cope with a highly stimulating social environment? – will Ricky tolerate the parallel play and/or physical proximity of other children?	Summarize typical daycare activities and environments Ricky participates in; note those Ricky finds calming or distressing. Summarize typical Kindergarten activities and environments Ricky participates in; note those Ricky finds calming or distressing.	Daycare staff Kindergarten teacher Resource teacher
Communication	– beginning to use single words – appears to understand small number of words for certain foods and activities – tries to repeat words when prompted – takes adult by the hand to get what he wants	– what specific words, vocalizations and gestures does Ricky use; when does he use them? – what words/phrases does Ricky understand? Does he respond to verbal requests/verbal instructions?	List words, gestures, and vocalizations Ricky uses to communicate.	Speech-language pathologist Mother Daycare staff Kindergarten teacher
Repetitive Patterns of Behaviour	– lines up small objects – will repeat favourite activities for up to 45 minutes – resists being redirected – is impulsive, wants to grab whatever he sees, has trouble attending to a simple activity such as stacking blocks	– what strategies are successful/ unsuccessful when attempting to engage Ricky in alternate activities?	Identify specific activities Ricky finds most difficult to discontinue; identify strategies which have been either successful or unsuccessful to encourage transitions.	Resource teacher Mother Daycare staff
Associated Characteristics				
Sensory	– does not have any apparent sensory (auditory, visual, tactile, vestibular) sensitivities – enjoys playing with toys that move and spin – enjoys playing at the sand and water tables – does not appear to be bothered by loud noises – good eater	– no current sensory concerns	not applicable	not applicable

(continued)

	Gathering Information			
	What Do We Know?	**What Do We Need to Know?**	**How Will We Find Out?**	**Who Will Do It?**
Anxiety; Resistance/ Anger	– resists being redirected – expresses resistance by vocalizing and rapidly shaking his fingers in front of his face	– what strategies are successful/ unsuccessful when attempting to engage Ricky in alternate activities? – does Ricky express resistance/anxiety in other ways? – what activities/ strategies does Ricky find calming?	Identify specific activities Ricky finds most difficult to discontinue. Identify strategies which have been either successful or unsuccessful to encourage transitions. Record classroom activities which cause anxiety/result in resistance, the behaviours that result, and the consequences that follow.	Resource teacher Mother Daycare staff Kindergarten teacher
Problem Solving/ Independence	– toilet training almost complete	– what toilet training strategies have been and are currently being used? How to transfer toilet training skills to school setting.	Record past/current strategies used to develop toileting skills.	Occupational therapist Mother Daycare staff

Approaches to Learning; Interests, Preferences	– physically active
	– prefers solitary play
	– preferred activities include:
	  – toys that move and spin
	  – sand and water tables
	  – lining up small objects
	  – cartoon videos
		– additional reinforcing activities	Continue identifying favourite activities for school.	Kindergarten teacher

Other Considerations				
Hearing	– recent routine check-up	– no current concerns	not applicable	not applicable
Vision	– recent routine check-up	– no current concerns	not applicable	not applicable
Medical	– recent routine check-up	– no current concerns	not applicable	not applicable
Dental	– recent routine check-up	– no current concerns	not applicable	not applicable
Cognitive	– developmental delay noted at time of ASD diagnosis (age 3)	– what were the results of the previous developmental/ cognitive assessment? – how might this developmental delay impact Ricky's learning?	Access previous developmental/cognitive assessment report.	Psychologist

Step Three:
The Student Profile

The process concludes with the creation of the student profile. The team summarizes the gathered information and uses it to agree upon priority learning needs.

History and Background

- five years old
- lives with his mother and two older siblings; youngest of three children
- has attended daycare for two years, with support of special needs worker

Diagnostic Summary

- ASD (Autism) and developmental delay of approximately 2 to 2½ years
- Vineland Adaptive Behavior Scales: significant delay in all domains
- vision and hearing normal

Interests, Strengths, Learning Approaches

(Visual, Auditory, Tactile, Edible, Fine Motor, Gross Motor)

- visual: toys with movement or spinning; cause-effect computer games, cartoon videos
- auditory: being sung to, music on videos
- tactile: all materials, sand, water, playdough, slick surfaces
- fine motor: puzzles, lining up small objects, sorting by colour
- gross motor: dancing to music
- edible: everything, especially salty and sweet

Current Levels of Performance

Communication:

- understands his name and some familiar nouns and verbs; understands that photos mean people, places, things
- communicates wishes by getting things independently or taking adult's arm; uses about five one-word phrases with intent, echoes some one- and two-syllable words spontaneously and clearly
- uses screaming in different volumes and tones to get attention or help, to show anger or frustration, to avoid demands and sometimes to self-stimulate
- uses peripheral vision to watch people and activities; has good visual memory for patterns; makes fleeting eye contact

Social:

- few independent play skills
- locks onto one repetitive activity and repeats for up to 45 minutes before moving on
- can't turn-take, even with an adult
- doesn't seem to understand "first/then" format or imitation—"watch me, do the same thing"

Adaptive:

- not fully toilet trained

Behaviour:

- resists adult structure or interference with his agenda by using his size and weight to resist, going limp and falling to floor, or screaming

Motor:

- good fine motor and bilateral skills
- stamina, motor planning, and gross motor skills are poor

Ricky's Priority Learning Needs

Communication:

- increase understanding for words, photos, picture symbols, and gestures
- increase expressive language skills (words, photos, picture symbols, and gestures)

Social:

- develop turn-taking skills
- develop parallel play skills with peers
- develop turn-taking skills with adults and peers

Self-Management:

- work within adult structures and routines

CHAPTER 3:

PLANNING FOR THE STUDENT WITH AUTISM SPECTRUM DISORDER

Determining the Direction of Programming ***3***
- What Are Possible Programming Options? *3*
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- Transition to School: Transition Action Plan (TAP) *7*
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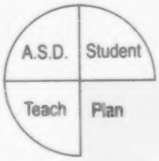
CHAPTER 3: PLANNING FOR THE STUDENT WITH AUTISM SPECTRUM DISORDER



The purpose of Chapter 3 is to outline how appropriate educational programming is developed for the student with ASD. The student profile provides the foundation for planning for the individual student. The student profile is based on an understanding of the characteristics of ASD (Chapter 1) as well as an understanding of the specific student with ASD (Chapter 2). When a student with ASD has learning needs that cannot be met through the provincial curricula, an Individual Education Plan (IEP) will be developed. Most students with ASD will have learning needs that the provincial curricula cannot meet.

The priority learning needs identified in the student profile are the starting point for determining the direction of appropriate educational programming. The planning process addresses a student's priority learning needs by identifying outcomes to be achieved, how resources will be used, and how progress will be evaluated.

Determining the Direction of Programming

The primary goal of the team is to work together to develop appropriate educational programming that allows the student with ASD to participate as fully as possible in the life of the school, family, and community.

What Are Possible Programming Options?

The full range of the Autism spectrum is wide. The profiles of students with the disorder will be similar in some ways (because they share characteristic features) and quite different in others. A student's individual profile should direct the team in determining the most appropriate programming options(s). In Manitoba, programming options include

- Provincial Curricula incorporating Differentiated Instruction
- Adaptations
- Curricular Modifications
- Individualized Programming

Table 3.1 provides a summary of each programming option.

Table 3.1: A Summary of Programming Options

Support
Provincial Curricula Provincial curricula are provided to educators by Manitoba Education, Citizenship and Youth. Reference: *Provincial Curriculum Documents** **Differentiated Instruction** Instruction that responds to the diverse learning needs of all students is called differentiated instruction. It includes a wide range of instructional strategies a teacher may use to support students in groups or as individuals. A teacher will often use differentiated instruction when planning lessons, teaching, and assessing and evaluating progress. *Differentiated instruction is appropriate for all students. Its flexibility offers opportunities to engage students with ASD by using instructional strategies, materials, and assessment processes that complement their particular interests and strengths.* Reference: Manitoba Education and Training. *Success for All Learners: A Handbook on Differentiating Instruction*, 1996.*
Adaptations Adaptation is the act of making changes in the teaching process, assessment process, instructional materials, or student products. These include changes to • physical environment • social environment • presentations • tests and assessments • assignments and projects • organizational supports • time required to achieve provincial outcomes *Adaptations are used when students with ASD are able to meet the same learning outcomes as their peers but need one or more of the adaptations listed above. Like differentiated instruction, adaptations offer the flexibility to adjust learning processes to the student's individual interests and strengths. Adaptations are specific to individual students and should be documented.* Reference: Manitoba Education, Training and Youth. *Supporting Inclusive Schools: A Handbook for Student Services*, 2001.**
Curricular Modification Modification means that the number, essence, or content of provincial learning outcomes are changed or simplified to fit the student's current level of cognitive/adaptive development. *Curricular modification is used with students with ASD who may benefit from participation in the provincial curricula. While the process for Senior Years students is outlined in the document referenced below, modification may be used with younger students with significant cognitive/adaptive disabilities.* A final note on adaptation and modification: While these terms are often used interchangeably, they represent very different practices and policies in Manitoba. Adaptations are changes made to the process of instruction or the product of learning (i.e., how the student demonstrates skill or knowledge); modifications are changes made to what the student is taught. Reference: Manitoba Education and Training. *Towards Inclusion: A Handbook for Modified Course Designation, Senior 1-4*, 1995.**
Individualized Programming Individualized programming consists of educational experiences that are functionally appropriate and highly individualized to take into account the unique learning requirements of the student with ASD. The Individual Education Plan (IEP)/Individual Transition Plan (ITP) serve as the basis for an individual curriculum for the student. *Individualized programming is provided for students with severe cognitive and adaptive disabilities that do not allow them to benefit from provincial curricula. While the process for Senior Years students is outlined in the document referenced below, individualized programming may be used with younger students with severe cognitive/adaptive disabilities.* Reference: Manitoba Education and Training. *Towards Inclusion: A Handbook for Individualized Programming Designation, Senior Years*, 1995.**

* *A copy of these documents may be obtained from the Manitoba Text Book Bureau (1-866-771-6822) or <www.mtbb.mb.ca>.*

** *A copy of these documents may be downloaded from <www.edu.gov.mb.ca/ks4/specedu/documents.html>.*

How Is the Direction of Programming Determined?

Programming should be determined by the student's profile. The team should review the student's current level of performance (including cognitive) and priority learning needs and select the programming option(s) that match the student profile.

Programming should be developed with attention to all relevant domains, especially social and communication development. This is particularly important with students who are able to achieve some or all of the prescribed learning outcomes in the provincial curricula. These students may be comparable to their peers in academic achievement, but they may experience great difficulty with the subtle social and communication demands of school and community life.

The team should also consider that:

- Cognitive disabilities may be present in addition to the ASD. While the number of students with mental retardation on the full Autism spectrum is not currently known, historical estimates of cognitive disability in classically Autistic students were as high as 75 percent. The presence of a cognitive disability will have implications on how a student learns and uses what he has learned.
- No two students with ASD will be the same. The symptoms of ASD may range from relatively mild to profoundly disabling because it is a spectrum disorder.
- Almost all students with ASD will have needs beyond the scope of the provincial curricula.
- Individual students with ASD typically experience gaps across areas of development. A student with average intelligence, for example, may have significantly delayed social skills. Hypothetical profiles illustrating this developmental "scatter" were shown in Chapter 1.
- Scatter may also exist within a single developmental domain. For example, students may be able to read aloud but comprehend little of what they are reading.
- The narrow range of interests and activities that students with ASD typically demonstrate often results in significant motivational challenges. Capable but unmotivated students may not achieve to their full potential.
- The generalization of skills from one setting or situation to another is difficult for a student with ASD. The team should be alert for potential difficulties and develop programming that encourages generalization.
- The student requires other resources and supports, such as the support of an educational assistant, clinician support, and special materials.

Planning

After determining the direction of programming, the team uses the information in the student profile to develop an individualized plan for the student.

Planning occurs throughout the student's time in school, from school entry to community transition upon graduation. The planning process results in an individual plan that addresses the student's priority learning needs identified in the profile. This plan contains

- a description of the student's current level of development and needs
- outcomes (based on the identified needs) to be achieved by the student in a specified period of time
- a description of how the outcomes will be achieved, including how resources and supports will be used and where the student will be educated
- roles and responsibilities of the people involved
- details of how progress will be evaluated

Planning processes used by school teams and outside agencies are summarized in Table 3.2. These transition planning processes were developed in partnership with other government departments and agencies to support timely and appropriate transitions for children and youth.

Table 3.2: A Summary of Planning Tools

Stage	***Planning Tool***	***Participants***
Transition to School (Preschool to Early Years)	Transition Action Plan (TAP) Reference: Manitoba Education and Training, and Children and Youth Secretariat. *Guidelines for Early Childhood Transition to School For Children with Special Needs*, 2002.	• parents • preschool/daycare/nursery staff • representatives from outside agencies • representatives from receiving school division and school
School	Individual Education Plan (IEP) Reference: Manitoba Education and Training. *Individual Education Planning: A Handbook for Developing and Implementing IEPs, Early to Senior Years*, 1998.	• in-school team, including parents and student • support team • representatives from outside agencies
Transition to Adult Life (Senior Years to community)	Individual Education Plan (IEP) Individual Transition Plan (ITP) Reference: Manitoba Education and Training, and Children and Youth Secretariat. *Manitoba Transition Planning Process Support Guidelines for Students with Special Needs Reaching Age 16 (from School to Services for Adults)*, 1998.	• in-school team, include parents and student • support team • representatives from outside agencies

A copy of these documents may be downloaded from <www.edu.gov.mb.ca/ks4/specedu/documents.html>.

Transition to School: Transition Action Plan (TAP)

Beginning school is an important event in the life of a young child. A carefully planned transition facilitates a student's entry into the school system. Those who know the student well, including the family, preschool service providers, and support agency personnel should work with school personnel to ensure a successful transition.

Transition planning should begin well before school entry. Often this planning process begins with a meeting between the family, the school team, and preschool and/or sending agency personnel. This might involve, for example, agencies or professionals such as The ABA Preschool Program, the Health Sciences Centre Autism Services, Society for Manitobans with Disabilities, private practitioners, and so on. The meeting provides an opportunity for participants to begin developing a Transition Action Plan (TAP), in which what is known about the child, what needs to be known, and procedures for gathering further information are identified. A TAP will help the school division plan resources for the next school year, and will facilitate continuity of established programming and appropriate supports.

School: Individual Education Plan (IEP)

Individual education planning is the process by which teams plan for students who require a range of supports. The IEP that results from this process describes how the student's educational programming will be provided.

The purpose of an IEP is to help students attain the skills and knowledge that are the next logical steps beyond their current level of performance. In considering these next steps, it is also important to consider how the student's situation may change over time. Anticipating changes allows the team to prepare the student for future environments and opportunities.

Students with carefully developed and implemented IEPs are more likely to reach their potential as learners. Because a wide range of students with very different profiles can be served through IEPs, each IEP is individual to the student for whom it was designed. Using the information in the student profile developed in Chapter 2, IEP development involves

- developing and writing the IEP by describing the student's current level of performance, identifying student-specific outcomes and performance objectives
- outlining teaching strategies
- implementing and reviewing the IEP by establishing an implementation plan and reviewing student progress, with adjustments made as required

An IEP

- contains high priority outcomes; it is not intended to represent everything a student might learn
- contains essential components, but its format may vary according to the student's profile and the direction of programming
- should be a living document and be reflected in the student's daily programming. Daily programming for students who are participating in the provincial curricula should include time allocations for outcomes identified in domains other than academic (such as communication, social skills, etc.). The team will need to balance the student's time table accordingly.

Transition to Adult Life: Individual Transition Plan (ITP) and Individual Education Plan (IEP)

As students reach adulthood, supports shift from education and children's services to the adult service system. A formal transition plan will assist a student with ASD in making a meaningful adjustment to community life. Most students with ASD will need an Individual Transition Plan, particularly if they require long-term supports from adult service agencies.

The identification of community-based outcomes drives transition planning. In turn, these outcomes set the direction of IEP planning during the student's remaining time in school and determine the daily programming that will prepare the student for community life.

Transition planning is a responsibility shared by the family and the school. It should involve anyone who is or will be a key participant in the student's personal plan. This includes the student (whenever possible), the parents, educators, clinicians, appropriate social and adult service personnel, and specialized service providers familiar with the student.

The Student Services Administrator or designate from each school division is responsible for initiating transition planning meetings, which should occur at least once per year for the student beginning at age 15 or 16 and continue until the student leaves school.

Please note: An ITP is a multi-system plan, involving the family, school, and other agencies. The student's IEP is the school portion of the ITP.

Table 3.3: Transition Planning

Considerations	Results
The team should consider • graduation or school exit date • employment options • post-secondary training/education options • income support opportunities • residential options • transportation needs • medical needs • community recreation and leisure options • maintenance of family/friend relationships • advocacy/guardianship	Transition planning should result in a plan that addresses • desired outcomes for adult life • specific current needs • how those needs will be met • the agencies/persons responsible • timelines

School personnel can help the student prepare for community life by providing opportunities to develop skills for work and independent living during their school years. Depending on the student's needs, interests, and abilities, this might include

- helping the student determine vocational preferences by providing a variety of work experiences
- encouraging participation in extracurricular activities and social events
- encouraging volunteer work
- helping with the development of a résumé and/or portfolio
- training in social skills for the workplace
- teaching appropriate dress and hygiene
- providing on-the-job preparation, once preferences have been established
- teaching the student to use public transportation
- training in self-management
- teaching functional academics appropriate to the ability level of the student

Determining Placement Options

Choosing an appropriate placement or learning environment(s) for a student with ASD should be done on an individual basis. Most students with ASD attend their neighbourhood or local schools, and are provided with programming, supports, and services identified in their IEP. Educating students with ASD in regular classrooms in local schools is the first placement option considered by a school division, in consultation with parents, school staff, and students (when possible).

Students may receive programming in

- their neighbourhood school in a classroom with their peers for the majority of the day
- their neighbourhood school in a classroom with their peers, and a special learning environment for a part of the day
- their neighbourhood school in a special learning environment for a the majority of the day
- a special learning environment that may not be in their neighbourhood school

Student-Specific Outcomes for Students with ASD

Student-Specific Outcomes and Performance Objectives

A student-specific outcome (SSO) is a concise description of what an individual student will know and be able to do by the end of the school year. Writing SSOs and Performance Objectives (POs) is a critical part of developing an appropriate plan for the student. They provide a focus for instruction and a way to measure the student's progress during the school year.

SSOs should be written with the student's current level of development in mind. The scope and degree of specificity of the SSO is determined by the needs of the individual student. An SSO that is appropriate for one student may be too broad or too narrow for another.

Writing appropriate SSOs is vital to the success of the planning and implementation of the IEP. Effective SSOs are SMART:

- **S**pecific: written in clear, unambiguous language
- **M**easurable: allow student achievement to be described, assessed, and evaluated
- **A**chievable: realistic for the student
- **R**elevant: meaningful for the student
- **T**ime-related: can be accomplished within a specified time period, typically one school year

The SSO needs to be broken down into smaller, more manageable sections to enable the student to learn the skills identified in the outcome. These smaller components or steps are the performance objectives (POs).

The SMART format should be used to write POs as well. They should be attainable within a reasonable period of time for the student. POs should be reviewed regularly and revised when necessary. If the student is not attaining a PO, it is often advisable to review and change the PO, or review instructional strategies, rather than extending the time to achieve it.

If the student shows exceptional progress or encounters unanticipated difficulties, SSOs (or POs) may need to be revised when the IEP is reviewed.

For suggestions on writing student-specific outcomes, please refer to Tool Box G: Writing Student-Specific Outcomes and Performance Objectives (pages 4.11 - 4.19) in *Individual Education Planning: A Handbook for Developing and Implementing IEPs, Early to Senior Years* (1988). Tool Box G is available online at <www.edu.gov.mb.ca/ks4/specedu/iep/pdf/a.pdf>.

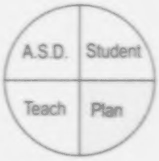
When Are Student-Specific Outcomes Required?

IEPs should contain student-specific outcomes that reflect the priority learning needs identified in the student profile, and not everything a student might learn or experience in school. An IEP with a meaningful balance among student-specific outcomes offers a means to address a range of student needs.

It is necessary to develop student-specific outcomes when

- provincial curricula are modified
- individualized programming is provided
- the student is working to achieve the learning objectives of the provincial curricula but has needs in other domains, such as social, communication, etc.

Many students with milder symptoms of ASD will be able to achieve some or all of the provincial curricular outcomes. Because they have ASD, however, they will also have needs outside of the provincial curriculum. It is expected that most students with ASD will require student-specific outcomes to address priority learning needs related to the primary characteristics and associated features of ASD. When SSOs and POs have been developed, the team will determine the strategies and materials for teaching the student, and record those in the plan.



At this stage, the team is familiar with the process to

☐ determine the student's direction of programming
☐ select an appropriate planning process
☐ develop student-specific outcomes and performance objectives
☐ determine the most appropriate educational setting(s)

Vignette: Ricky

Student-Specific Outcomes

Domain: Social

Student-Specific Outcome

By June ____, Ricky will take 4 turns with 1 peer during a structured adult-facilitated activity in 8 out of 10 opportunities over 10 consecutive days.

Performance Objectives	Instructional Strategies	Materials/Resources
By October, Ricky will be able to: a. do a floor or table-top parallel play activity with familiar materials for 10 minutes twice a day for 5 days, with no additional prompts or adult structure – with a familiar adult – with a familiar peer b. take 2 turns and remain engaged with a known and preferred activity twice a day for 5 days – with a familiar adult – with a familiar peer By December, Ricky will be able to: a. choose a preferred turn-taking activity when given 2 choices b. use a 3-word scripted phrase, with prompting, to invite a peer to participate in the chosen activity By March, Ricky will be able to: a. choose a preferred turn-taking activity when given 3 choices b. use a 3-word scripted phrase, with prompting, to invite a peer to participate in the chosen activity c. take 4, then 5 turns and remain engaged with a known and preferred activity twice a day for 5 days – with a familiar adult – with a familiar peer	Develop list of preferred activities that can be used as turn-taking activities. Include parallel play and turn-taking activity on daily schedule. To develop parallel play, observe child using favourite activity, approach as close as comfortable for child and do same or similar activity with no interaction, staying for 5 minutes, then for longer periods. Initially have no interaction. Gradually begin simple interactions by imitating one of student's actions, waiting to see if he will imitate you, or by reacting to something he does, etc. Once he tolerates adult parallel play, add one child with adult. Gradually withdraw adult presence. To teach turn-taking: use direct instruction and modeling. Begin in a quiet, non-distracting setting using scripted language ("My turn"; "Your turn"). Use a social story describing turn-taking with a peer. Teach peer partners appropriate turn-taking behaviours and language. Provide direct adult support, cueing and modeling during peer interactions to ensure success. Alternate turn-taking sessions with less structured preferred activities.	Toys that move and/or spin Sand-table toys Water-table toys – store in secure yet accessible area Daily schedule Toys that move and/or spin Sand-table toys Water-table toys Social story

Roles/ Responsibilities	Date Started	Date Completed	Evaluation and Review
Teacher and/or Educational Assistant			Maintain record of turn-taking sessions including: date, activity selected, level of prompt required to initiate invitation to peer, level of prompt required to take turn, number of turns taken.
Teacher			Establish baseline based on first 10 sessions.
Teacher and/or Educational Assistant			Summarize daily records after every 10 sessions; tally level of prompts required and numbers of turns taken to determine effectiveness of instructional strategies.
Speech-Language Pathologist Teacher and/or Educational Assistant			
Teacher and/or Educational Assistant Peer partner(s)			
Teacher and/or Educational Assistant			
Teacher and/or Educational Assistant			
Teacher and/or Educational Assistant			

(continued)

Domain: Self-Management

Student-Specific Outcome

By June ____, Ricky will have "quiet hands" (hands in lap, not grabbing for materials) for 15 minutes during one seatwork activity each day for 10 consecutive days, with prompting.

Performance Objectives	Instructional Strategies	Materials/Resources
By October, Ricky will put hands in lap within 10 seconds when shown "Look" and "Quiet hands" graphics and given verbal/gestural cues. By December, Ricky will watch an activity demonstration with "quiet hands" before taking materials, with graphic and adult gestural prompts to "look" and "have quiet hands" for • 30 seconds • 60 seconds By March, Ricky will be able to watch an activity demonstration for 2 minutes with quiet hands before taking materials in a • familiar non-distracting setting • novel non-distracting setting • classroom with peers	Collect high-interest materials from profile (for example, spinning toys, puzzles, playdough). Begin in non-distracting setting. Show Ricky materials, give him a minute to feel and manipulate, then put them on a coloured mat to help him learn that they can't be touched when they're on the mat. Use verbal and gestures to show him "Look" and "Quiet hands. "If he doesn't imitate "Quiet hands' within 10 seconds, repeat cues and gently guide his hands to his lap. Demonstrate the task briefly (5-10 seconds). Praise for looking and "Quiet hands" and give him the materials. Repeat sessions 4 times daily, gradually lengthening time which he must watch. Use social story with graphics to describe desired behaviour and read before each session, then before some sessions. Use verbal and physical prompts ("Quiet hands"; gently guiding hands to lap) during seatwork activities, as required. Post visual "Quiet hands" cue on work table; draw attention to cue at beginning of each seatwork activity. Record baseline amount of time for which seatwork activities can be tolerated without distress; gradually increase amount of time participation is required.	Visual prompt Social story Visual prompts

Roles/ Responsibilities	Date Started	Date Completed	Evaluation and Review
Teacher and/or Educational Assistant			Collect high-interest materials from profile (for example, spinning toys, puzzles, playdough).
Teacher			Begin in non-distracting setting. Show Ricky materials, give him a minute to feel and manipulate, then put them on a coloured mat to help him learn that they can't be touched when they're on the mat.
Speech-Language Pathologist Teacher and/or Educational Assistant Speech-Language Pathologist Teacher and/or Educational Assistant Teacher and/or Educational Assistant			Use verbal and gestures to show him "Look" and "Quiet hands." If he doesn't imitate "Quiet hands' within 10 seconds, repeat cues and gently guide his hands to his lap. Demonstrate the task briefly (5-10 seconds). Praise for looking and "Quiet hands" and give him the materials. Repeat sessions 4 times daily, gradually lengthening time which he must watch. Use social story with graphics to describe desired behaviour and read before each session, then before some sessions.

(continued)

Domain: Self-Management

Student-Specific Outcome

By June ____, Ricky will follow his daily timetable with adult prompting.

Performance Objectives	Instructional Strategies	Materials/Resources
By October, Ricky will be able to transition to 1 preferred activity using a tangible object as a cue. By February, Ricky will be able to follow a morning or afternoon schedule involving 4 transitions with adult verbal and physical prompts.	Provide teacher-made tangible schedule system for morning and afternoon schedules. Begin by modeling for student that each object represents an activity and model how to use the system. Provide verbal and physical cues to prepare student for an upcoming transition. Initially build in a preferred activity every second activity. Teach transfer by using different adults and different settings.	Teacher-made schedule. A variety of small objects will be required, such as a small ball to represent gym class, a spoon to represent snack time.

Domain: Communication

Student-Specific Outcome

By June ____, Ricky will appropriately use 10 new vocabulary items from classroom themes and/or topics independently.

Performance Objectives	Instructional Strategies	Materials/Resources
By October, Ricky will be able to: a. point to 5 items upon request b label 3-5 items when modeled and prompted By February, Ricky will be able to: c. point to 10 items upon request d. label 5-8 items when modeled or prompted e. independently label 1-3 items	Provide multiple opportunities for the teacher to identify/label the target objects or people throughout the day. Provide multiple opportunities for Ricky to practise pointing to the target objects, and label for him. Encourage Ricky to point to the object as you label them. Use the target words in a variety of settings throughout the day. Provide opportunity to practise using the objects in a game whenever possible. Use photos of the objects and people to facilitate story building and "talking." Teach transfer by using different adults and different settings.	10 objects or people that are important to Ricky and the classroom teacher Photos of the objects or people Tracking sheet to determine which words are being used with prompts, and which are being used independently

Roles/ Responsibilities	Date Started	Date Completed	Evaluation and Review
Teacher to: – supply tangible objects, model for student and educational assistant the proper method of using the schedule system – provide student with feedback – develop assessment rubric and instruct the educational assistant on its use			Take data every two weeks and review weekly to determine effectiveness of tangible object. Review data on prompts to determine when to reduce the frequency of prompts and when to move from physical to gestural to verbal prompts.

Roles/ Responsibilities	Date Started	Date Completed	Evaluation and Review
The teacher will provide the student with feedback after each attempt. The teacher will record the student's attempts on a weekly basis on the form provided by speech-language pathologist. The teacher will provide a verbal prompt when necessary.			Teacher-made test to determine mastery of each level, a) to e).

CHAPTER 4:

TEACHING THE STUDENT WITH AUTISM SPECTRUM DISORDER

Learning Characteristics of Students with ASD *3*

- Strengths and Needs *3*
- Motivations and Interests *4*
- Structure, Routine, and Predictability *4*
- Responsiveness to Visual Support *4*

General Instructional Strategies *6*

Teaching the Student with ASD How to Learn *17*

- Connecting Actions with Specific Reinforcers *18*
- Teaching Interaction *20*
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Teaching a New Skill or Activity *23*

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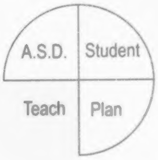
CHAPTER 4: TEACHING THE STUDENT WITH AUTISM SPECTRUM DISORDER



When teaching a student with ASD there are numerous instructional strategies for the team to choose from. The selection of appropriate instructional strategies depends on the team's knowledge of ASD (Chapter 1), understanding of the student's individual strengths and needs (Chapter 2), and the outcomes identified in the student's educational plan (Chapter 3). Instructional strategies cannot be effectively applied, however, without understanding how a student with ASD learns.

In order to teach a student with ASD a new skill or activity, it is necessary to understand how the student learns. Many students with ASD, for example, need to learn how to learn. The typical learning characteristics of students with ASD, as well as general strategies for teaching, are outlined in Chapter 4.

Learning Characteristics of Students with ASD

As students with ASD display common characteristics of ASD, they also share common strengths and needs in their capacities for learning. Because students with ASD are highly individual learners there will always be some element of trial and error in selecting appropriate instructional strategies, but by understanding the relationship between the primary and associated characteristics of ASD and typical learning strengths and needs, it is possible for the team to identify areas where there are many opportunities for success.

Typical learning characteristics of students with ASD can be identified in the following areas

- strengths and needs
- motivations and interests
- structure, routine, and predictability
- responsiveness to visual support

Strengths and Needs

Students with ASD learn best when educators select instructional strategies that best fit the individual strengths and needs which have been outlined in the student profile. Instruction that focuses on student strengths can provide a means of compensating for areas of student weakness or need, encouraging the acquisition of new skills, and reducing the student's frustration. For example, if reading is a relative strength for a student who does not comprehend spoken language well, then strategies that incorporate print into instruction might aid the development of comprehension skills.

Motivations and Interests

Students with ASD are typically motivated by highly individual and frequently idiosyncratic things. They may not be motivated and rewarded by the same things that motivate other students, such as verbal praise.

Strategies that incorporate specific interests tend to be more motivating than instructional strategies that do not. Students will typically participate in instruction with greater attention and for longer periods of time when engaged in activities they find motivating.

For a Preference Survey to be used with the student or with parents or other caregivers, see Janzen, J. *Understanding the Nature of Autism*, 2003: 99. (Education)

Motivation, the personal reason for doing something, is critical for learning. It may come from within the person (intrinsic) or from outside the person (extrinsic). A motivated student is more likely to

- attend to an activity
- enjoy doing an activity
- stay with an activity longer
- require less prompting and encouragement to complete an activity

Seeking out things that motivate a student with ASD creates the potential for the student to engage in activities and to be more receptive to learning. As an additional benefit, student behaviour is often best when the student is engaged in activities that incorporate individual interests.

Structure, Routine, and Predictability

Students with ASD benefit from structure, routine, and predictability in their lives. Providing structure, routine, and predictability does not imply forcing a student to follow a strict routine imposed by an adult. Rather, the learning environment should be structured to provide an appropriate level of consistency and clarity; students should know where things belong, what is expected of them, and what comes next.

Individual needs and preferences should determine the amount of structure, routine, and predictability each student requires. Some students may require more than others. Also a student may need more structure, routine, and predictability on some days than others. It is important to make adjustments as required.

Visual support is typically the most effective vehicle to communicate structure, routine, and predictability because it offers the student a permanent reminder of expectations. Visual supports can also increase the student's potential to function with greater independence once the routine is established.

Responsiveness to Visual Support

The majority of students with ASD process visual information better than auditory information. Information presented in visual form such as colour photographs, pictures, line drawings, and print offers students more success with comprehension and expression than information presented in other forms. With visual supports, students can

For good visuals of students using appropriate behaviours, see

- Street, A., and R. Cattoche. *Picture the Progress*, 1995. (Social Relationships)
- Reese, P.B., and N.C. Challenner. *Primary, Intermediate and Adolescent Social Skills Lessons*, 1999. (Social Stories)

examine the information until they are able to process the contents of the message. In contrast, verbal (or gestural) information is transient: once delivered, the message is gone. For students who require extra time to process language or who may not be able to pick out relevant information from background noise, visual supports allow them the opportunity to focus on the message.

For more examples of the use of visual supports, see

- Hodgdon, L.M. *Visual Strategies for Improving Communication*, 1995.
- Hodgdon, L.M. *Solving Behaviour Problems in Autism*, 1999.
- Bondy, A., and L. Frost. *A Picture's Worth*, 2001.

  (Visual Strategies)
- Janzen, J. "Organize and Structure Visual Support Systems." *Understanding the Nature of Autism*, 2003: 197-229.

  (Education)
- Myles, B.S., and D. Adreon. Table 4.3 "Visual Supports for Middle and High School Students with AS." *Asperger Syndrome and Adolescence*, 2001: 87-91.
- Moore, S.T. "Visuals." *Asperger Syndrome and the Elementary School Experience*, 2002: 53-99.

  (AS)

Visual supports range in complexity from simple and concrete to complex and abstract; from real objects, colour photographs, colour illustrations, black-and-white pictures, and line drawings to written language. Visual supports can include pictures, books, checklists, schedules, social stories, written instructions, and so on.

Visual supports can be used to

- *organize student activities* (for example, daily schedules, mini-schedules, activity checklists, calendars, choice boards)
- *provide directions or instructions* (for example, visual display of classroom assignments, file cards with directions for specific tasks and activities, pictographs and written instruction for presenting new information)
- *assist in illustrating the organization of the environment* (for example, signs, lists, charts, messages, labeled objects and containers)
- *support appropriate behaviour* (for example, posted rules and representations to signal steps of routines)
- *teach social skills* (for example, pictorial social stories which depict specific social situations and demonstrate appropriate social cues and responses)
- *teach self-control* (for example, pictographs that provide cues for behaviour expectations)

Students who use visual support are more likely to reach their potential as verbal language users than those who do not. In addition, students with ASD who are verbal typically continue to benefit from visual support because it provides useful supplementary information, which helps to compensate for difficulties in attention and language comprehension. Concerns about visual support hampering the development of verbal language often limit its use. There is no research to indicate that visual support impedes language acquisition.

For downloadable visual symbols and photos, try

<www.usevisualstrategies.com>
<www.do2learn.com>
<www.card.ufl.edu/visual.html>

General Instructional Strategies

A wealth of instructional strategies is available for students with ASD. Ultimately, effective instructional strategy selection depends on knowledge of ASD and the individual student. The effectiveness of any particular strategy is best determined by the progress of individual students toward achieving their determined outcomes.

The strategies in this section reflect the primary characteristics and associated features of ASD and the well-documented learning styles of students with ASD. The selection of instructional strategies, however, does not need to be restricted to specific categories or particular settings. One instructional strategy may be used in a number of ways. For example, a daily schedule may be used to provide structure, routine, and predictability; teach new vocabulary; develop expressive language skills; reduce anxiety resulting from change; and so on.

In addition, most of these instructional strategies are as appropriate for use in the home or community as they are in educational settings. With some minor adjustments, most strategies can be tailored to fit a variety of settings. Using the same strategy in a number of settings may have important benefits, including a generalization of skills which can be applied between one setting and another and the development of communication between home and school.

Please note: Strategy selection must be guided by the qualifications and expertise required to implement the strategies. For example, in most cases, educational assistants will require specific training and ongoing supervision when they work with students. If a team determines that consultation is required concerning the selection and implementation of specific strategies, it should involve the appropriate professional.

Strategy	**Page**
task analysis	7
break verbal instructions into small steps	8
discrete trial methods	8
prompt hierarchies	9
encourage independent effort and incorporate proactive measures to reduce potential prompt dependence	10
behaviour shaping	11
use meaningful reinforcement	11
provide precise, positive feedback	12
pace tasks at student's level	13
plan and present tasks at an appropriate level of difficulty	13
use concrete examples and hands-on activities	13
introduce new tasks in a familiar environment when possible	13
plan for transitions	14
use consistent cues or routines to signal transitions	14
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checklists	15
provide opportunities for choice	15
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highlight important information	15
organize teaching materials and situations to highlight information	15
post classroom rules	16
know the student and maintain a list of strengths and interests	16
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- **Task Analysis**

  Task analysis can be used to teach a wide range of skills to a student with ASD. It involves breaking complex tasks down into smaller subtasks. These smaller, more manageable steps may then be taught and reinforced in sequence, allowing the student to learn the larger, more complex task. If the student continues to have difficulty with smaller steps, they can be broken down into even smaller steps. For example, a task analysis of a social skill such as asking a peer to play may be broken down into small steps to facilitate student learning.

Task Analysis: Asking a Peer to Play

STUDENT'S NAME: ____________________

TASK: Asking a peer to play

Date											
Identify peer who is not currently playing with anyone											
Identify activity to play											
Approach peer											
Gain peer's attention by saying name or tapping him or her on the shoulder											
Establish eye contact with peer											
Ask peer if he or she would like to play											
Commence activity if peer agrees to play, or approach another peer											

A blank Task Analysis form is available in Appendix F: Forms.

- **Break Verbal Instructions into Small Steps**

  Avoid long strings of verbal information when providing instruction for students with ASD. Supporting verbal instruction with visual cues and representation will help students comprehend material and understand expectations.

See Janzen, J. "Organize and Structure Verbal Information." *Understanding the Nature of Autism*, 2003: 230-244. (Education)

- **Discrete Trial Methods**

  When using discrete trial training, the instructor presents the stimulus for the desired behaviour (i.e., gives the directions or instructions) and prompts the student; the student responds and then the instructor provides a consequence (something that increases the frequency of the desired behaviour or reduces the frequency of undesired behaviour). Using prompts is an important element of instruction for some students with ASD. Prompts may be physical, gestural, or verbal. They should only be used as long as they are needed, as students can become dependent on prompts. The prompt

For a comprehensive discussion of the history and strategies to implementation of Applied Behavioural Analysis (ABA), see the summer 2001 special edition of *Focus on Autism and Other Developmental Disabilities* 16(2). (ABA)

For software modules with discrete trial methods for teaching many different skills, see <www.dttrainer.com>

is often designed to model the desired behavior or assist the student in performing it.

Here is an example of a discrete trial method.

Outcome: Identify numbers given a verbal direction:

Jackie will touch the card representing the correct number four out of five times when presented with cards with the numbers 1, 2, 3, 4, and 5 on them.

Stimulus	Instructor Prompt	Student Response	Consequence
Instructor says, "Touch 5."	Instructor taps the card with #5 on it.	Student touches the card with #5 on it.	Instructor smiles and says, "Good work, Jackie."
Instructor says, "Touch 5."	Instructor points at card with #5 on it.	Student touches card with #3 on it.	Instructor turns head and makes no verbal response.
Instructor says, "Touch 5."	Instructor taps the card with #5 on it.	Student flaps hands.	Instructor turns head and makes no verbal response.
Instructor says, "Touch 5."	Instructor points at card with #5 on it.	Student touches the card with #5 on it.	Instructor smiles and says "Good work, Jackie."

(Adapted from Leaf, R., and J. McEachin, eds. *A Work in Progress*, 1999.)

Please note: It is important to distinguish between Applied Behavioural Analysis (ABA) as a general term that refers to a collection of teaching strategies based on behaviour modification, and intensive ABA programming intended for young children with ASD. Intensive ABA programming involves ABA strategies and techniques applied under the supervision of a qualified professional, a significant number of hours devoted to therapy per week, and involvement by family members in the therapy process. In Manitoba, early intensive ABA is provided through St. Amant Centre.

Please see the Manitoba Education, Citizenship and Youth website for links to this and other services for children and students with ASD: <www.edu.gov.mb.ca/KS4/specedu/aut>

- **Prompt Hierarchies**

  Prompts are the cues or reminders used when training a student toward a desired behaviour. The term hierarchy is used to rank prompts from most intrusive to least intrusive. Understanding prompt hierarchies helps to avoid teaching a student with ASD to become over-dependent on prompts. Table 4.2 illustrates a prompt hierarchy.

Table 4.2: Prompt Hierarchy

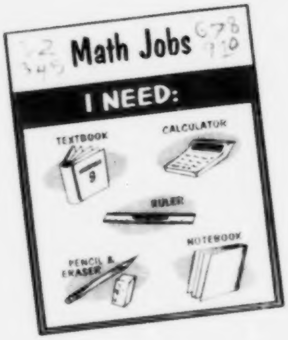
Stimuli	Level of prompt	Behaviour	Consequence
Tape recorder is available in the school for student's use; music has been determined to be a favourite activity for the student; student has free time.	8-Natural	Without prompting, and given free time and the presence of the tape recorder, student turns on tape recorder.	Student listens to music.
	7-Gestural	Adult points toward tape recorder; student turns on tape recorder.	Student listens to music; adult may nod approval.
	6-Indirect verbal	Adult says, "Why don't you listen to music?" Student turns on tape recorder.	Student listens to music; adult says, "Good idea!"
	5-Direct verbal	Adult says, "Turn on the tape recorder." Student complies.	Student listens to music; adult may verbally reinforce for turning on tape recorder.
	4-Model	Adult models turning on tape recorder for student, then gives student a turn to do so.	Student is reinforced for attending to model, and gets to listen to music when he turns tape recorder on himself.
	3-Minimal physical	Adult points student in direction of tape recorder and pushes student's hand toward tape recorder if necessary; student turns on tape recorder.	Student listens to music; adult may need to provide additional verbal praise.
	2-Partial physical	Adult positions student's hand on tape recorder button, but releases hand so student can press it.	Music may be enough, but student may require additional verbal or object reinforcement.
	1-Full physical	Adult physically assists the student's hand through the turning on of the tape recorder.	Again, music may be sufficient, but additional reinforcement may be necessary.

- **Encourage Independent Effort and Incorporate Proactive Measures to Reduce Potential Prompt Dependence**

  Students with ASD who are constantly prompted may not reach their potential for independent action. Since independence is a desired outcome for all students, instruction should incorporate strategies such as those below to decrease the potential for prompt dependence.

  - Use visual aids to decrease reliance on physical and verbal prompts.
  - Use peers to support independence.
  - Plan ways to fade prompts.
  - Provide visual organizational aids, such as schedules, task outlines, checklists and charts, and involve the student in developing and implementing them, if feasible.
  - Provide instruction to increase the student's awareness of environmental cues (for example, preparing the student for the ringing of a school bell at recess).

For a discussion of using prompts and cues, see Janzen, J.E. "Teach New Skills." *Understanding the Nature of Autism*, 2003: 245-269. (Education)



Math Jobs: Reproduced from *Teaching Students with Autism: A Resource Guide for Schools.* © 2000 British Columbia Ministry of Education.

- Teach in an environment that remains consistent, using consistent environmental cues.
- Ensure that adults are not always positioned too close to the student and that more than one adult has contact with the student.
- Reward on-task behaviour.

A note on reducing prompts: These strategies are intended for situations in which the student is ready for some independent function. Decisions about when to incorporate these strategies and whether they are achieving the desired outcome should be based on how the student responds.

- **Behaviour Shaping**

Students with ASD often need assistance to develop behaviours that are not already part of their repertoire of skills. Behaviour shaping as a teaching strategy is a way of helping students develop desired new behaviours. First, the target behaviour is identified and the student's closest approximation to that behaviour is reinforced. If prompts are used, they should be of the least intrusive level and faded as quickly as possible. Gradually, expectations for performance are increased and only responses that more closely approach the target behaviour are reinforced.

For a discussion of behavioural strategies, see

- Harris, S.L., and M.J. Weiss. *Right From the Start*. 1998.
  (ABA)
- Janzen, J. "Critical Instructional Strategies." *Understanding the Nature of Autism*. 2003: 247-269.
  (Education)
- Sundberg, M.L., and J.W. Partington. *Assessment of Basic Language and Learning Skills*. 1998.
  (ABA)

This is a formal use of a strategy often used naturally by parents whose child is just beginning to communicate. For example:

- The child reaches toward a pitcher of juice.
- The parent pours some and says "juice."
- The child says "j" and receives the juice.
- The parents repeat the prompts on other occasions.
- Gradually, the child's ability to imitate and articulate improves, until the child is able to repeat the word "juice" and then say "juice" without a parental prompt.

- **Use Meaningful Reinforcement**

A reinforcer can be anything, from praise to tangible objects, that increases the frequency of a behaviour. Students with ASD may not be motivated by common reinforcers that work with other students. They might instead prefer having some time alone, taking a trip to the cafeteria, going for a walk, having an opportunity to talk with a preferred adult, listening to music, performing a favourite routine, or playing with a desired object that provides specific sensory stimulation.

A list of preferred activities and reinforcers can be developed for a student with input from his family and others who know the student well. These reinforcers can then be used to motivate the student to learn new skills.

Table 4.3 contains a list of sample reinforcers.

Table 4.3: Sample Reinforcers

For students who like:	Sample Reinforcers Available in School Environments
• to read or be read to	• hearing a few pages of an exciting book after a task is completed, or reading it alone • listening to taped books or viewing CD-ROM stories • listening or watching a tape of themselves reading • dictating while someone scribes or keyboards their words or phrases • having access to particular books available to them only after a particular task
• to draw	• copying line drawings or illustrations on topics of special interest • illustrating daily schedules or social stories • colouring a part of a picture each time a task is completed until the whole drawing is coloured • illustrating posters for the library and so on • using special art materials or paper • colouring photocopied drawings, dot-to-dots, or mazes
• to use mechanical skills	• playing with cause-and-effect toys • having access to materials which can be put together, including construction blocks, etc. • building models, especially ones with moving parts • reading books or watching videos or CD-ROMs that explain how things work
• to be in control	• getting to choose activities or order of tasks • being the caller, instruction-giver, cue-giver, or "banker" in games such as Lotto™, Junior Monopoly™, or guessing games • ringing an old-fashioned bell at the school door to signal other students to come inside • being a "detective" by decoding a message or reading questions on cards and then looking for the answer • making Trivial Pursuit™ style questions for classmates on a classroom unit or on a topic of their choice • doing worksheets that require finding and correcting errors
• to socialize or engage verbally with adults	• "checking in" frequently with teacher or educational assistant, verbally or non-verbally • discussing topics of their choice with people of their choice during scheduled times of the day • being involved in non-academic tasks with favourite adults, such as setting up and taking down gym stations, shelving library books, unpacking and storing supplies, tidying up staff room, helping Kindergarten teacher with classroom maintenance, etc. • participating in activities that involve traveling around the school and interacting with many people, such as collecting recycling or call-back sheets, delivering materials to classrooms, etc.

- **Provide Precise, Positive Feedback**

  Give students precise information about what they do right or well (for example, "Great colouring" or "Good finishing of that math problem.") Generalized praise may result in unintended learning that is hard to reverse. Students with ASD may learn in one trial, so directing the praise to the very specific target behaviour is important. Accidental learning can occur if the student mistakenly connects something he is doing with the reinforcement he receives. Saying "Sal, you are doing very well at multiplying those numbers" directs attention to the activity of multiplication; saying "Sal, you are doing very well" when Sal is also swinging his feet while he does the math assignment might connect the feet swinging with the general praise.

- **Pace Tasks at Student's Level**

  Students with ASD often need more time to process information than typically developing students. Providing extra time to complete activities and allowing for an appropriate amount of time between instructions and expected responses gives students with ASD greater opportunity to succeed at their tasks.

- **Plan and Present Tasks at an Appropriate Level of Difficulty**

  Students with ASD may be particularly vulnerable to feelings of anxiety and frustration if they cannot perform assigned tasks. Increasing the level of difficulty gradually and providing the necessary learning supports (particularly with visual information rather than solely verbal explanations) will enable the student to develop skills and will assist in minimizing the student's frustration.

- **Use Concrete Examples and Hands-On Activities**

  Students with ASD learn by seeing and doing. When possible, try to use a concrete example to supplement oral instructions. For example, in demonstrating a project such as making a Father's Day card, show the student what the finished product might look like while explaining the steps in how to make it. Teach abstract ideas and conceptual thinking using specific examples, and vary the examples so that the concept is not accidentally learned as applying in only one way.

  For resources to support hands-on learning in teaching concepts, see Mulstay-Muratore, L. *Autism and PDD: Abstract Concepts*, Level 1 and Level 2, 2002. (Education)

- **Introduce New Tasks in a Familiar Environment when Possible**

  Students with ASD often resist attempting new activities or learning new skills. When introducing something to a student with ASD for the first time, it is often helpful to do so in a familiar environment. When it is not possible to introduce unfamiliar tasks in a familiar environment, supports such as pictures, videotapes, or social stories may help prepare the student for the task.

- **Plan for Transitions**

  Students with ASD frequently have difficulty with the unknown and fear the unpredictable. As a result, transitions are often difficult and may result in increased anxiety and inappropriate or resistant behaviours. Transitions for students with ASD should therefore be carefully and thoughtfully planned.

  For a detailed transition checklist and discussion, see Myles, B.S., and D. Adreon. "Setting Demands" (46-49) and "Transition Planning for the Student with Asperger Syndrome" (121-135). *Asperger Syndrome and Adolescence*, 2001.
  (AS)

  Whether the student is moving between classrooms, schools, or different areas in the same room, it is a good idea to prepare the student well in advance of the change. It is also important to prepare any people who may be receiving the student. Transition issues are generally similar regardless of whether the transition is large or small; however, additional time and preparation may be necessary for larger transitions. If a student is moving between classrooms, for example, he will need to get used to a new room and possibly new people; if he is moving between schools he will need to adjust to a whole new building and its rules and expectations.

  For a discussion of post-school transitions, see Myles, B.S., and R. Simpson. "Planning for Life after School." *Asperger Syndrome: A Guide for Educators and Parents*, 1998: 97-113.
  (AS)

- **Use Consistent Cues or Routines to Signal Transitions**

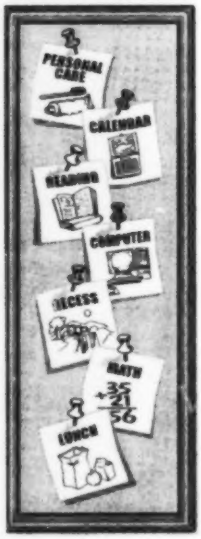
  When cues or routines are consistently repeated, it becomes easier for a student with ASD to become familiar with a schedule, anticipate new activities, and prepare for making transitions. For example, if a student hears the same song before a certain activity every day, he may begin to associate that song with stopping what he is doing and moving to the area where the new activity will take place. The words "almost done" may become a cue that the present activity is nearly finished and a new one will begin soon. Cues and routines become familiar with repetition.

  See Janzen, J.E. "Organize and Structure Events in Time" (178-186), and "Organize and Structure Events as Routines" (188-194). *Understanding the Nature of Autism*, 2003.
  (Education)

- **Schedules**

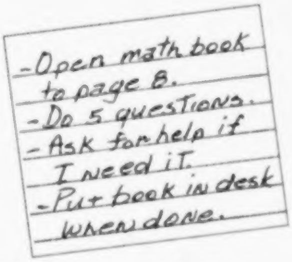
  Schedules provide a visual means of outlining events that will take place in a morning or afternoon, or in a day, week, or month. The schedule allows students with ASD to anticipate what will happen in a given space of time, which can improve the student's ability to make transitions as well as reduce his anxiety.

LACEY'S SCHEDULE



Lacey's Schedule: Reproduced from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

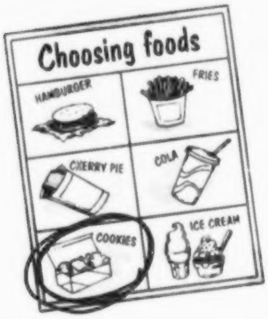
- **Checklists**


-Open math book
to page 8.
-Do 5 questions.
-Ask for help if
I need it.
-Put book in desk
when done.

Checklists describe in step-by-step fashion what students need to do to complete a task. Students with ASD often experience difficulty with processing oral instructions and sequences. Checklists offer students a "roadmap" through a task or activity, allowing them to navigate an assignment without getting lost. The use of checklists promotes independence.

- **Provide Opportunities for Choice**

Students with ASD often have a limited ability to communicate, and strategies for providing choice will need to be developed on an individual basis. Regardless of which strategies are used, it is essential that the student learns how to make choices. Many parts of the student's life may necessarily be highly structured and controlled by adults, and he may not have many opportunities for making choices. Sometimes a student consistently chooses one activity or object because he does not know how to choose another.

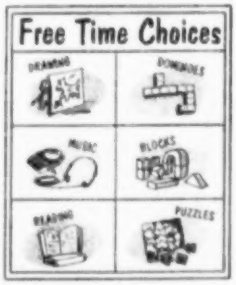


Until the student grasps the concept of choice, choices should be limited to preferred and non-preferred activities. More elaborate choices can then be presented. Open-ended choices (for example, "What would you like to drink?") will not help to develop the student's skill at making choices, and instead may be a source of anxiety and/or frustration. A more successful strategy would involve asking the student whether he prefers orange juice or milk, for example.

See Hodgdon, L.M. "Making Choices and Requests" (125-138) and "Protest and Rejection Skills" (139-150) in *Solving Behaviour Problems in Autism*, 1999.
(Visual Strategies)

- **Choice-Making Tools**

Students with ASD often experience difficulty with choice-making. Materials such as choice boards will help students develop choice-making skills in a motivating and natural context. The symbols and layout of choice boards can be adjusted according to individual levels of ability.



- **Highlight Important Information**

The ability of students with ASD to focus on important information may be affected by a number of factors, including environmental distractions, a lack of interest in the material, or an inability to interpret cues that emphasize key pieces of information. As a result, time can be wasted and learning opportunities may be lost.

Choosing Foods, Free Time Choices: Reproduced from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

It is essential to be aware of whether students with ASD are able to focus on critical information. It may be necessary to help them identify what is important by

- using a highlighter marker to identify key words or concepts
- providing summaries (written or pictorial) of lessons or concepts
- providing questions to develop reading comprehension

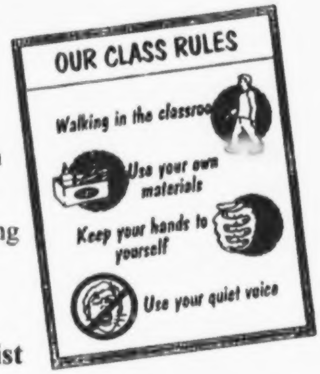
- **Organize Teaching Materials and Situations to Highlight Information**

  Visual aids and environmental organization can help a student attend to pertinent information. Remove extraneous materials from the desk or table before attempting to teach a new skill. Present only the text the student will read, rather than the whole book.

- **Post Classroom Rules**

  Classroom rules can be outlined in brief statements or illustrations that provide concrete information about

  - structure and routines of the classroom
  - personal space
  - required behaviour (for example, raising hand)
  - movement within the classroom



- **Know the Student and Maintain a List of Strengths and Interests**

  Family members and caregivers can provide valuable information about what a student knows and does at home or in the community. Educators likewise can provide information about the student's strengths and interests in school. Together, these interests and strengths can be incorporated into instruction and used for reinforcing successful learning and appropriate behaviour.

- **Develop Talent and Interest Areas**

  If a student with ASD demonstrates a particular interest and/or strength in a specific area (for example, music, drama, art, graphics, computer), provide opportunities for him to develop further expertise in that area. The ability to develop and indulge in talents and interests not only provides enjoyment for the student, it creates opportunities for success, strengthens existing skills, and improves confidence, all of which contribute to a strong foundation for building new skills.

For articles by Temple Grandin regarding developing talents and helping students with ASD choose the right job and manage the transition to the world of work, see <www.autism.org/temple/jobs.html>

Our Class Rules: Reproduced from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

Waylon is a Grade 5 student with ASD who is extremely interested in computers; he shows little interest in interacting with his classmates and resists written assignments.

The students in Grade 5 use the *New Word Game* as a strategy to construct and confirm meaning during each novel study. Before reading, each student writes down a word for which he or she does not know the meaning; after reading, he or she looks in the dictionary and writes the meaning that fits the context of the story. The students then challenge each other to provide the correct meaning for each word, and post words that no one can define on the bulletin board.

Waylon's teacher has put him in charge of the *New Word Game* database. After each chapter, Waylon is given time to update the class database with words he and his classmates have defined; he is also responsible for helping his classmates if they have difficulty accessing the database and helping them develop their own databases.

- **Direct and Broaden Interests into Useful Activities**

  The repetitive patterns of behaviours, interests, and activities that are a primary characteristic of ASD may be incorporated into instructional activities. Incorporating a student's interest into instructional strategies may increase his attention and help to facilitate learning.

Teaching the Student with ASD How to Learn

Many students with ASD need to learn how to learn before they can begin acquiring new skills. All students with ASD have individual learning preferences, strengths, and interests, but they often share certain areas of need which must be developed in order for them to participate in the learning process. Once these individual areas of need have been identified, the general strategies described above can be used to strengthen and develop these areas. Only then will the student with ASD be prepared for successful learning, and the general strategies described above can be applied to the teaching of new activities and skills.

In order to help the student with ASD develop these fundamental skills, it is important to get to know the student, develop a relationship, and earn the student's trust.

The characteristic learning needs of students with ASD can be strengthened by

- connecting actions with specific reinforcers
- teaching interaction
- teaching joint attention and focus
- teaching imitation
- teaching waiting before acting

A reinforcer is something that follows a behaviour and increases the likelihood that it will happen again. To be effective, a reinforcer must be something the student with ASD wants and enjoys. A student with ASD can enjoy many things (for example, food, drink, sensory experiences). He may need to be taught to connect a behaviour or action to a specific reinforcer.

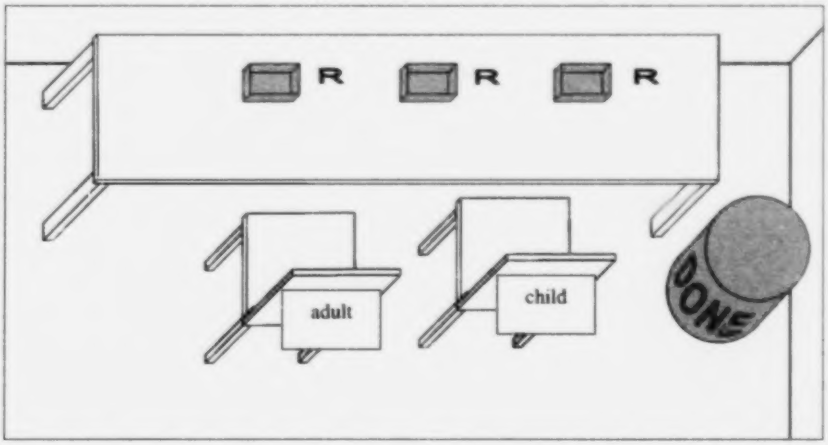
Connecting Actions with Specific Reinforcers

Typically developing students learn to connect actions with reinforcers by exploring their physical and social environment. They learn to repeat actions associated with pleasant consequences and avoid those associated with unpleasant consequences. They understand that their actions can elicit verbal and non-verbal expressions of pleasure or displeasure from other people.

Many students with ASD explore their environment in limited ways and do not learn to connect actions with specific reinforcers effectively. They may not understand non-verbal and verbal expressions of pleasure from adults, or they may relate them to actions of their own. They may learn a repertoire of challenging behaviours because those behaviours lead to predictable adult responses.

- Leaf, R., and J. McEachin, eds. *A Work in Progress*, 1999.
- Martin, G., and J. Pear. *Behavior Modification*. 4th ed., 1992. (ABA)

To connect an action to a specific reinforcer, a student with ASD must learn that *first I do this and then I get that*. When the student understands the *first this/then that* connection, it will be possible to teach him more effectively. In the diagram below, activities (the boxes) are followed by reinforcers (the R) to illustrate how to develop the *first this/then that* connection for students. When an activity has been completed and the student has been reinforced, the materials are put in the "Done" container and the next *first this/then that* connection is attempted.



For students with a small repertoire of activities and limited willingness to work within an adult-directed routine, the structured teaching approach developed by TEACCH in North Carolina can be used, as in the following example.

Six-year-old Jana has ASD and significant mental retardation. She has very limited language comprehension and is non-verbal. She has no experience in a classroom environment, and resists interference with her agenda of roaming, by falling to the floor or running and throwing a tantrum.

Reinforcers identified from observation are

- sweet cereal, potato chips, grapes
- stacking up objects and knocking them down
- rhythmic rock music
- inserting objects into small spaces
- deep pressure to shoulders

The teaching routine developed for part of her day is as follows:

- Key staff person spends time in relationship-building activities so that Jana trusts her and sees her as a source of concrete and social reinforcers.
- Adult shows Jana photo of "Work Time" table in visual schedule and takes her to it.
- Adult seats Jana at table against wall, and sits next to her.
- Adult shows Jana material in container (simple block pattern card and blocks), models its use, and points to a pile of blocks next to container, using "first/then" words and signs.
- If necessary, adult provides hand-over-hand support so Jana completes task.
- Adult quickly tries to get eye contact, smiles, says "good," squeezes Jana's shoulders firmly, and points to reinforcer. Adult lets Jana stack up and knock down blocks for two or three minutes after setting timer.
- Adult warns "almost finished" with words and sign, and then "finished" when timer rings. Adult puts all materials away quickly.
- Adult returns Jana to visual schedule, shows "Work Time" is finished, and shows a picture for next activity.
- See <www.teacch.com> for information on structured teaching and articles on educational and communication strategies.
- For more workstation information and printable symbols and photos of workstations, see <www.members.aol.com/Room5>.

The adult gradually expands "Work Time" by adding more containers and more tasks in containers, and making the tasks in containers more complex or time-consuming. Tasks are chosen because they address motor, imitation, or readiness skills in Jana's IEP, and use materials that she already likes.

As Jana masters activities that she enjoys, access to them can be used as a reinforcer for new skills that are harder or less naturally reinforcing.

Teaching Interaction

Students with ASD need to learn to recognize and value other people's positive social responses. The attention and approval of another person can become a powerful social reinforcer that helps the student attend to his environment and co-operate with adult expectations.

Students with ASD need to learn that

- at least one key adult will be able to interpret them to the outside world, and the outside world to them
- the adult can be more than a useful tool
- interaction with other people can be fun and enjoyable

For students who are not well-bonded to key adults at school and who have few activities they enjoy, it is important to set aside times in the day when the agenda is to have fun and engage in activities that allow the student to associate pleasure with the adult's company.

Teaching Joint Attention and Focus

Joint attention is a skill acquired early in the life of a typically developing child. Joint attention occurs when the child is able to follow the gaze of another person to the object the person is looking at. This skill is critical for the development of both language and social communication skills because it helps the young child connect the adult's actions and words to the object being named. Without this connection, language is difficult to learn. As the child gets older, more sophisticated joint attention skills, such as pointing and shared eye contact, are acquired. These more sophisticated skills contribute to increased language learning.

Many students with ASD do not acquire joint attending skills as young children and, as a result, engaging in eye contact and joint attention is difficult for them. Sharing information with another person using eye contact may be a source of confusion and anxiety for a student with ASD. To reduce this confusion and anxiety, students with ASD may avoid eye contact with people in their environment and lose many opportunities for learning new skills (in particular, social and communication).

Students with ASD who have poor comprehension of language, especially of concepts and abstractions, often miss large parts of instruction while trying to process other parts. Some students who are very distractible and/or have sensory sensitivities need to use a lot of emotional and physical energy to cope with overload and to attend to instruction.

Stressors can include

- the need to attend to and process visual and auditory input simultaneously
- the need to process language that is too abstract, has multiple possible meanings, is figurative, or is shaded by emotional tone or non-verbal communication
- the need to adjust to different physical settings and to different adults many times daily
- tactile discomfort created by room temperature, clothing, paints, playdough
- strong smells from the science or art room, lunchroom, pizza or popcorn days, chemicals used to clean, perfumes, and cosmetics

- close physical proximity to peers in groups, lines, gyms, near lockers
- sounds or noises beyond student's control in classrooms, hallways, bathrooms, gym, assemblies, dances; bells and fire drills; clicking fluorescent lights; bubbling fish tanks

Exhaustion from trying to screen distractions and pay attention may be the cause of irritability, outbursts, or complete shutdowns in students with ASD, especially as the day progresses. Information in the Autism Spectrum Disorder Inventory (Appendix D) can be used to assess the degree to which this applies to the individual student, and decide what strategies might work to engage and regain attention.

For a discussion of preliminary research into relationship-focused intervention with children with ASD, see Mahoney, G., and F. Perales. "Using Relationship-Focused Intervention to Enhance the Social-Emotional Functioning of Young Children with Autism Spectrum Disorders." *Topics in Early Childhood Special Education*, 2003: 77-89.

(Social Relationships)

Some suggestions:

- let the student look first and listen later, or look/feel/manipulate first and listen later
- experiment with a fiddle object in the student's pocket (or clipped to a belt or attached to a desk)
- keep the student's work area uncluttered
- organize material on the blackboard neatly, with straight lines and ample blank space to minimize distractions
- give the student frequent movement breaks to keep stimulation at an optimum level
- help the student learn to tolerate noise, touch, and proximity with others
- let the student wear earplugs or earphones in class to muffle noise
- break tasks into smaller chunks and reinforce more frequently
- develop an "alerting" signal to tell the student when to pay close attention
- use verbal and gestural "highlighting" to flag important material
- incorporate materials or topics of perseverative interest into instruction
- provide a low-stimulation area for seatwork, such as a carrel or a desk facing a blank wall
- teach the student to recognize overload and ways to screen distractions
- plan proactive ways for the student to indicate when he is overloaded (for example, with verbal language, printed words, or pictures he can point to)

For information on relationship development intervention, see

- Greenspan, S.I., and S. Wieder. *The Child with Special Needs*, 1998.
- Gutstein, S. *Autism Asperger*, 2000.
- Gutstein, S., and R. Sheely. *Relationship Development Intervention with Young Children*, 2002.

(Early Development)

A note on setting: The more distractible and impulsive the student, the more important it is to minimize distractions and maximize the chances of successful learning and effective reinforcement.

Very distractible and distracting students may need to spend some of their learning time in a setting that provides

- minimal distractions
- maximum ability for adults to contain the student in one place for table-top activities, and to manage challenging behaviours when they occur

For a review of one relationship-focused intervention model, see "The Effectiveness of Relationship Development Intervention to Remediate Experience-Sharing Deficits of Autism-Spectrum Children" at <www.connectionscenter.com>.

Teaching Imitation

Typically developing students learn many skills by watching and spontaneously imitating others, whether the activity is using a spoon, naming the letters of the alphabet, or operating a VCR. Many student with ASD have poor spontaneous imitation skills because they tend to experience difficulty with

- eye-hand or bilateral coordination
- motor skills
- motivation
- attending

In order for a student with ASD to learn how to learn, or learn new skills, it is critical that the student is able to attend to gestures and demonstrations, and watch and imitate what they see. For many students with ASD, especially those with poor auditory skills, "watch and imitate" will be the primary avenue for lifelong learning of motor, self-help, and vocational skills.

A Step-by-Step Process for Teaching Imitation

- choose a distraction-free environment
- use visual/auditory/tactile strategies to get the student's attention
- let the student look at, touch, and manipulate materials to satisfy the need to touch and explore, and to feel less anxious about the newness
- move materials out of reach and use consistent verbal/visual cues such as calling the student's name, pointing to eyes and saying "watch"
- if the student is impulsive, try to get "quiet hands" by having the student sit on his hands or grasp a chair (or whatever curbs grabbing behaviour)
- do a one-step action quickly, such as stacking one block on another or drawing a line to connect two dots
- give the student material and let him first try on his own
- if the student does not produce the desired response, try again with hand-over-hand support if required

- praise and reward any success
- be sure the concept of "being finished" is clear to the student (for example, if drawing lines with a marker, have five markers in the container, and discard them one by one after using them. When there are no markers left, the task is finished)
- gradually fade prompts and make imitation tasks more complex

Students with ASD can also practise imitation in casual situations and settings by imitating activities such as throwing bean bags through hula hoops, for example.

If a student is learning to imitate actions required to finish a project, the student may need to see the project finished first and/or watch the steps of the process several times before understanding what is expected. Experiment to see what works.

Teaching Waiting before Acting

Some students with ASD may act impulsively in a teaching situation by performing a behaviour before instructions are completed. For those students, learning to wait before acting will increase their potential to learn new skills.

Activities that require the student to listen and repeat simple instructions before acting (if communication skills allow), watch before acting, or complete some kind of task before acting will help the student learn to wait. Examples of such activities include

- adding particular shapes to a construction of poly-octons or construction blocks
- imitating patterns with a variety of colours, shapes, and objects
- following verbal or written direction to find objects; following instructions that increase gradually in complexity
- watching a bubble float to the floor before stamping on it
- watching a flashlight beam travel and stop on a particular object before the object is taken or named
- counting to a specified number before initiating an action (running, shooting a basketball, pushing a truck)

For more suggestions for students who are distractible and impulsive, see

- Dornbush, M.P., and S.K. Pruitt. *Teaching the Tiger*, 1995. (Related Disabilities)
- Rief, S.F. *How to Reach and Teach ADD/ADHD Children*, 1993. (Sensory/Self Regulation)

Note: If possible, with all of these activities, have the student reverse roles and be the initiator.

Teaching a New Skill or Activity

Once the team has progressed through the multi-step process of understanding ASD, getting to know the individual student, identifying learning outcomes, acquiring knowledge of general instructional strategies to teach a student with ASD, and preparing the student to participate in the learning process, the team is in a position to attempt to teach a variety of new skills or activities.

Learning new skills and activities is important for a student with ASD because it offers the potential for greater independence, increased opportunities for social interaction, and a more meaningful school experience. The more new skills or activities a student is able to learn, the greater the benefit.

For suggestions to teach activities to children with beginning skills, see

- Hannah, L. *Teaching Young Children with Autistic Spectrum Disorders to Learn*, 2001.
- Leicestershire County Council, and Fosse Health Trust. *Autism*, 1998.
  (Early Development)

A student with ASD may experience difficulty learning new skills for a variety of reasons. For example, a student with ASD may

- resist anything new
- be unable to focus attention
- have difficulty watching and imitating
- not connect actions to reinforcers
- be so interested in a part of an object (for example, the spinning wheels on a scooter board) that he is unable to learn how to use the object in a functional way
- have fine and gross motor difficulties that interfere with performing certain skills

A Process for Teaching a New Skill or Activity

The process for teaching a new skill or activity is as follows:

1. observe the student
2. prioritize and prepare
3. teach the new skill or activity

1. Observe

Observe the student in an environment with many choices for activities. This may need to be a self-contained area out of the classroom. Even older, more able students with good school, computer, and communication skills may have a limited repertoire of activities and difficulty learning new ones. Provide activities designed to appeal to much younger students as well as to their chronological age group.

Some Questions to Ask

- What activities does the student enjoy (visual, auditory, tactile, gross motor)?
- How does he explore?
- Does he try to get adult attention or approval? How?
- What kind of adult interaction works best (quiet/animated, verbal/non-verbal?)
- Does he choose age-appropriate activities or those for younger children? Can he watch and imitate others' actions?
- What sensory sensitivities does he show?
- What are possible primary reinforcers (for example, food or drink)?
- Does he understand "first/then" (doing something to get something he likes)?

2. Prioritize and Prepare

At this Stage:

- Choose an activity or skill to teach.
- Break it into small, manageable parts.
- Select materials that motivate the student.
- Select reinforcers.
- Select the most appropriate environment for teaching.

Note:

- Since most students with ASD will take longer to learn and hence can't learn everything we would like to teach, choose activities that will be the most useful to them in the future.

  For example, for students who like to be active but don't have good motor abilities, developing skills with balls, from rolling or bouncing playground balls to shooting baskets or kicking a soccer ball, will also give them a way of socializing with their peers.

  Another student who is older, with good verbal skills but weak motor and social skills with partner activities, might benefit from learning to play familiar card or board games that can later be done with peers.

  For a very distractible student or one with weak motor skills, a beginning activity might be to drop one block into a large coffee can, or to push down once on a top and watch it spin. For a student with more advanced skills, a beginning activity might be a Marbleworks™ type construction game or a board or card game.
- It may be necessary to work in a small room with a door, or at least an area that can be partitioned. For table-top activities, arrange a table with two chairs so that the adult sits between the student and the door, making running away less likely. Minimize distractions in the room.

3. Teach

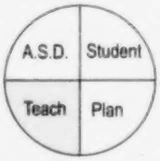
Steps in Teaching a New Skill or Activity

- Show the student the activity and the reinforcer.
- Begin with the first step of the task-analyzed sequence.
- Use words, gestures, or physical cues (in whatever combination is appropriate for the student) to communicate "first do the task, and then get the reinforcer."
- Prompt as required.
- Reinforce the student.

Note:

- It might be necessary to start with a full hand-over-hand prompt to maximize the student's success and your opportunity to reinforce.
- Initially, reinforce every correct response, even if you have provided complete physical support. Always pair social reinforcement (such as verbal praise, high-five, head-rub, or whatever students have shown you they like) with the concrete reinforcement.

- Fade to a lesser physical prompt as appropriate, such as touching the elbow or lifting the hand, then using a gestural prompt and then a verbal prompt.
- Gradually provide the reinforcer less frequently so that the student is doing more or staying on task longer.
- Trial and error will show how to adjust the sequence for students who can't tolerate touch, or who can't process verbal prompting while trying to do a motor action.
- Before a student with ASD can do the activity independently, or as a shared social experience, he will have to be able to stick with it long enough to learn to do the actions of the task so that it becomes automatic. This allows him to remember and anticipate the sequence and enjoy the predictability.
- If the student resists, try to persevere over several sessions; resistance may be a reflexive reaction to anything new.
- When the student has mastered the activity with one adult, try to involve one other familiar adult and then a familiar peer. The student now has a new task that no longer involves doing the activity, but managing the physical presence of the other person, the parallel play, the sharing of materials, or the waiting and turn-taking. It might be necessary to go back to more frequent reinforcement and shorter sessions until the student learns to manage, and then to enjoy, the activity as part of a social experience.



At this stage, the team is

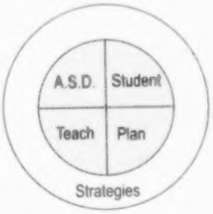
☐ familiar with the learning characteristics of a student with ASD
☐ familiar with general instructional strategies
☐ able to identify areas of need in student learning
☐ able to prepare the student to participate in learning
☐ able to teach a new activity or skill

CHAPTER 5:

INSTRUCTIONAL STRATEGIES FOR THE STUDENT WITH AUTISM SPECTRUM DISORDER

Instructional Strategies *3*
- Social Interaction *5*
- Communication Development *14*
- Restricted Repertoire of Activities, Interests, and Behaviours *25*
- Associated Features *27*

CHAPTER 5: INSTRUCTIONAL STRATEGIES FOR THE STUDENT WITH AUTISM SPECTRUM DISORDER



The team is now prepared to select and implement instructional strategies for students with ASD. This multi-step process involves

- understanding Autism Spectrum Disorder (Chapter 1)
- understanding the student with ASD (Chapter 2)
- planning for the student's education (Chapter 3)
- learning how to implement instruction (Chapter 4)

Chapter 5 contains an overview of the range of possibilities and resources for teaching students with ASD. Instructional strategies are organized according to their relationship to the primary and associated characteristics of ASD. This chapter is not intended to be exhaustive. In addition, instructional strategies may change over time, with new ones appearing and other ones falling out of favour.

Instructional Strategies

The last two decades have seen expansion in the identification of effective instructional strategies for students with ASD. Several reviews are available which summarize research findings for effective early intervention (for ages 0-8) programming as well as applicability to students of all ages.

In 2001 the US National Research Council (NRC) published a report on the state of scientific evidence and the effects of early educational intervention on young children. The report was completed by a national team of scholars at the request of the US Department of Education's Office of Special Education Programs.

According to the NRC report:

- there are many examples of substantial student progress in relatively short time periods, in response to specific intervention techniques
- longitudinal studies have documented changes in IQ scores and in core deficits
- children's outcomes vary, with some making substantial gains and some making slow gains
- although it is clear that some interventions lead to improvements, there is "no direct, clear relationship between any particular intervention and a child's progress" (National Research Council, 2001: 5).

Instructional strategies may address student needs by

- supporting student-specific outcomes (SSOs) in the student's Individual Education Plan (IEP). The name of the person using the strategy, the materials required, and the means of implementation should be recorded in the IEP.
- offering flexibility in the implementation of the programming. For example, if a student has received instruction of sufficient intensity for a reasonable period of time and a review of his progress indicates that he is not progressing the way the team anticipated, the first consideration should be to review the instructional strategies and/or identify necessary prerequisite skills rather than rework IEP outcomes.
- addressing student needs that are not formally identified in the IEP. For example, a class schedule placed on the classroom wall may help students with ASD manage changes in their day. While not documented in an IEP, such approaches can make an important contribution to student success.
- offering variety to the student and educators. For example, if an outcome concerns learning to request objects, then instruction could incorporate a variety of objects in a number of different settings, with different adults and peers throughout the day. This variety has the additional benefit of encouraging the generalization (using it in more than one place with more than one person) of the new skill.

Social Interaction

1. Direct Instruction
2. Teacher Mediation
3. Structured Play/Social Skills Training Groups
4. Social Stories
5. Cognitive Picture Rehearsal
6. Self-Monitoring/Self-Management Skills
7. Peer Mediation and Peer Support

Social and relationship skill development is essential for students with ASD. Appropriate social interactions are important at home, in school, and in community environments.

Learning the basic rules of social interaction may help a student with ASD function more appropriately in social situations. It may also reduce anxiety and challenging coping behaviours.

Many students with ASD feel a drive to interact with others and would like to be part of the social world around them. Typically, however, they don't understand social cues and the rules of interaction, and they have not learned to enjoy interactions with peers or adults. Being accepted by others is central to the quality of life that many people experience and positive relations play a large part in a student's social and emotional development.

"Social interaction refers to establishing and maintaining positive social relations with others, including making appropriate social initiations and appropriately responding to social initiations of others."

—Simpson, R.L., et al. *Social Skills for Students with Autism*, 1991: 2.

To develop social skills and an understanding of how to function in social situations, students with ASD need

- a good relationship with one or more adults
- a repertoire of activities to be used as vehicles for social interaction
- explicit and direct teaching of specific social skills
- opportunities to interact and participate in a variety of natural settings where appropriate models, social cues, and functional reinforcers are available

A note on teaching social skills: It is impossible to separate the development of social and relationship skills from other areas of development, such as adaptive skills, self-help skills, behaviour management and, perhaps most importantly, communication skills. As a result, strategies for developing social skills are embedded in other strategies throughout Chapter 5.

1. Direct Instruction

Social skills are best learned in the context of natural routines, where opportunities are available to make choices, solve problems, and use functional communication and social skills. The development of reciprocal social relationships depends on the interrelationship of factors such as the number, type, setting, and distribution of social interactions in which the student is involved. However, the natural activities of the day do not typically offer enough

For activites to develop non-verbal communication skills, see

- Duke, M.P., and S. Nowicki. *Helping the Child Who Doesn't Fit In*, 1992.
- Duke, M.P., S. Nowicki, and E.A. Martin. *Teaching Your Child the Language of Social Success*, 1996.

(Social Relationships)

opportunities either to teach those lessons that others learn without instruction, or to practise the complex skills required to establish strong social skills.

Direct instruction is a good way to develop social play, peer-group participation, social communication, school interactions, and self-management. Direct skill instruction

- identifies social skills that need to be developed
- determines the steps required to build those skills
- provides practice in a variety of settings

Critical social skills for instruction include

- *understanding and using non-verbal communication:* Gestures, facial expressions, body language, tone of voice and other non-verbal communications of meaning and feeling can be taught using visuals, role-playing, rehearsal, and discussion.
- *waiting:* Visual cues such as objects, pictures, and written words can provide concrete information to make waiting less abstract and more specific to the situation.
- *taking turns:* Turn-taking can be taught through the use of social stories and by using a picture or pictograph to cue the student. It may also be necessary to provide some instruction and rehearsal in turn-taking activities.
- *making transitions:* Using social stories and providing warnings with visual cues, such as symbols that are understood by the student, can help the student make the transition from one activity to another. Transitions can be particularly difficult if the student has not completed the activity; the student may need to be prepared for the possibility of having to finish later.
- *changing the topic in conversation:* Some students may stay on one topic and appear unable or unwilling to talk about anything else. Staying with one behaviour or topic in this way is referred to as perseveration. Visual rules, established time limits, and setting a time and place to engage in a favourite topic may help in teaching students when they need to end or change the topic.

For suggestions for direct instruction in social interaction and social skills, see

- Quill, K.A. *Teaching Children with Autism: Strategies to Enhance Communication and Socialization*, 1995. (Social Relationships)
- Aarons, M., and T. Gittens. *Autism: A Social Skills Approach for Children and Adolescents*, 1998. (Social Relationships)
- Gajewski, N., et al. *Social Star* (Book 1 and 2), 1993. (Social Relationships)
- Jenson, W.R., et al. *The Tough Kid Tool Box*, 2000. (Social Relationships)
- Sheridan, S.M. *The Tough Kid Social Skills Book*, 1997. (Social Relationships)
- Weiss, M.J., and S.L. Harris. *Reaching Out, Joining In*, 2001. (Social Relationships)
- Wilson, C. *Room 14*, 1993. (Communication)

- *completing tasks:* It may help to teach students to use environmental cues, such as observing and following the behaviour of other students, to know when an activity is finished. It may also help to use a timer and to teach methods for checking their own work.
- *initiating an action:* Social stories, combined with photographs or pictures, can be particularly useful for teaching a student how to approach others, ask for something, get into a game, say hello, and leave a situation if upset.
- *being flexible:* Visual supports can be used to explain changes in a concrete way. If sequenced schedules or picture routines are used, a specific picture or symbol can be removed or crossed out and another put in its place.
- *being quiet:* Visual supports may be helpful in teaching the specific behaviours for being quiet and for teaching rules for specific situations.

2. Teacher Mediation

In this approach, the teacher or other adult prompts the student to engage in an interactive behaviour which, if it occurs, is responded to positively by others. The teacher provides the student with verbal prompts to engage in the interactive behaviour. If the student interacts, the teacher provides praise and encouragement; if the student fails to respond, the teacher repeats the verbal prompt and may also provide a physical prompt.

Teacher mediation helps students with ASD increase their level of social interaction. However, teacher prompts can disrupt ongoing social exchanges, resulting in brief, sometimes stilted interactions. It is important to gradually decrease prompts because students with ASD can become dependent on them, initiating and responding only when instructed.

3. Structured Play/Social Skills Training Groups

Structured integrated play groups can provide opportunities for younger students with ASD to interact with their peers, and can create a natural environment for incidental teaching of social skills. Play groups provide natural situations in which students with ASD use language to express wants, practise being near other children, and imitate social interactions between typical peers. Older students with ASD may benefit from systematic social skill instruction within a small-group structured format.

- Wolfberg, P. *Peer Play and the Autism Spectrum*, 2003.

(Social Relationships)

- Sussman, F. *More Than Words*, 1999.

  (Communication)
- Winner, M.G. *Thinking about You, Thinking about Me: Philosophy and Strategies to Further Develop Perspective Taking and Communicative Abilities to Persons with Social-Cognitive Deficits*, 2002.
- Winner, M.G. *Inside Out: What Makes a Person with Social-Cognitive Deficits Tick?*, 2000.

  (Social Relationships)

Structured play and social skills groups are best held in a relatively small, safe area with limited distractions and well-defined boundaries. There are a variety of social skills training programs and resources available. Effective programming uses assessment to identify skills for instruction. Lessons typically follow a similar format:

- identify the skill, its components, and when the skill is used
- model the skill
- role-play the skill
- provide opportunities to practise
- incorporate strategies for generalization

Students with ASD may need particular emphasis on learning to generalize new skills. Cue cards, self-monitoring, and self-reinforcement systems can be used in natural settings to prompt students to rehearse skills.

Useful websites:
<www.socialthinking.com>
<www.socialskillbuilder.com>
<www.iidc.indiana.edu/irca/SocialLeisure/socialskillstraining.html>

4. Social Stories

A social story describes appropriate social cues and student responses in specific situations. It is written for individual students according to specific needs. The social story can be used for a variety of purposes, including

- facilitating the inclusion of students in a variety of environments
- introducing changes and new routines
- explaining reasons for the behaviour of others
- teaching situation-specific social skills
- assisting in teaching new academic skills

To be effective, a social story should

- describe a situation from the perspective of the student
- direct the student to do the appropriate behaviour
- be in the voice of the student (i.e., from the "I" perspective)
- be consistent with the student's level of cognitive development

- Gray, C. *Comic Strip Conversations: Colorful, Illustrated Interactions with Students with Autism and Related Disorders*, 1994. Also available in French. (Social Relationships)
- Gray, C. *The New Social Story Book*, 2000. (Social Stories)
- Gray, C. *Taming the Recess Jungle*, 1993. (Social Relationships)
- Gray, C., and A.L. White, eds. *My Social Stories Book*, 2002. (Social Stories)

Social stories are developed following established guidelines and can be created by parents, educators, and others.

The process of developing a social story begins with the identification of a student need through observation and assessment. Once a difficult situation is identified, the author observes the situation and tries to understand the perspective of the student in terms of what will be seen, heard, and felt. The author, in collaboration with the student (when possible), then writes the story at an appropriate comprehension level and from the perspective of the student, and includes descriptive, directive, and perspective statements.

- *Descriptive statements* provide information on the setting, activity, and people involved.
- *Directive statements* are positive statements about the desired response for a given situation.
- *Perspective statements* provide a description of the possible reactions of others.

For more information, see
- Carol Gray's website <www.the graycenter.org>
- <www.linguisystems.com>

A booklet with one or two sentences and one main concept per page is an effective social story format. Depending on the student's level of comprehension, symbols, drawings, or photographs can be included to support meaning for the student.

Sample:

My Turn on the Computer

p. 1 If I wait for my turn on the computer, the other kids like me better.

p. 2 Everyone likes to have a turn on the computer.

p. 3 When other kids are using the computer, I will be quiet and wait for my turn.

p. 4 When I am finished on the computer, other kids can use it. That is okay, because I know I can use it the next day.

p. 5 When I wait for my turn on the computer, everyone will be happy.

There are three basic strategies for implementing a social story:

- For a student who reads independently, the story is read aloud twice by an adult, followed by the student reading it aloud. The student then reads it daily.
- If the student does not read, the story may be recorded on a cassette tape with a signal (i.e., bell) to turn the pages. The student is taught to "read" the story and reads it daily.
- To incorporate modeling, the story can be videotaped. The story is read aloud on a videotape, with one page on the screen at a time.

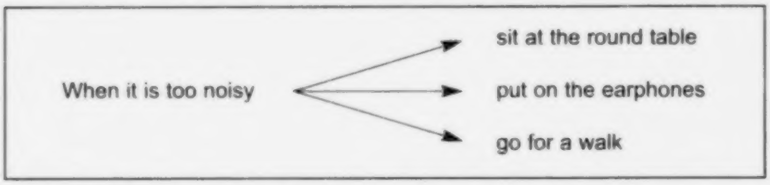
My Turn on the Computer: Adapted from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

5. Cognitive Picture Rehearsal

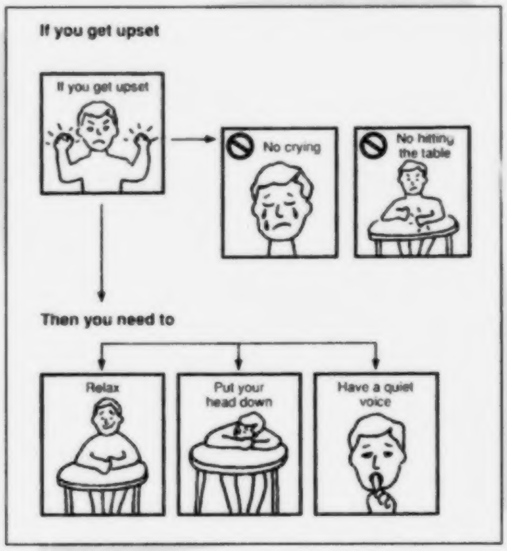
Cognitive picture rehearsal can be used to teach a sequence of skills that will enable a student to recognize and control his own stress, resolve his own problems, and re-engage himself in appropriate activity. The scripts used to introduce self-control routines are based on a functional analysis of problematic situations. Scripts or stories are presented as a sequence of behaviours in the form of pictures or pictographs with an accompanying script. The student is guided through repeated practice of the sequence of behaviours and relaxation strategies.

Groden, J., and P. LeVasseur. "Cognitive Picture Rehearsal." *Teaching Children with Autism: Strategies to Enhance Communication and Socialization*, 1995.

(Social Relationships)


When it is too noisy
sit at the round table
put on the earphones
go for a walk

(Quill, Kathleen Ann. *Teaching Children with Autism: Strategies to Enhance Communication and Socialization*, 1995: 279.)


If you get upset
If you get upset
No crying
No hitting the table
Then you need to
Relax
Put your head down
Have a quiet voice

If You Get Upset: Reproduced by permission of Quirk Roberts Publishing. <http://www.usevisualstrategies.com>

6. Self-Monitoring/Self-Management Skills

All students, including those with ASD, need to increase independent participation in a variety of environments. One way to increase independence in higher-functioning students with ASD is to teach self-management procedures, in which the student monitors his own behaviour in order to earn positive reinforcement. Self-management may increase on-task behaviour, and decrease challenging behaviour.

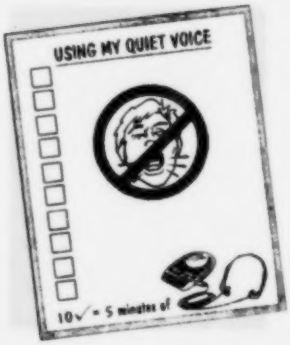
Self-management allows the student with ASD to become more actively involved in the intervention process and more involved in the educational environment. More active involvement by the student with ASD has the potential to improve autonomy by reducing dependence on adult intervention.

Desirable behaviour typically increases when a student is taught to self-monitor. The accuracy of the self-monitoring may not be as important as the process and awareness it builds in the student.

The process for teaching self-management skills includes

- defining the target behaviour that the student will self-monitor
- identifying reinforcers
- creating a self-monitoring method for the student to collect data (for example, a chart, stickers, or some kind of low-tech counting device)
- teaching the student the target behaviour and how to use the self-monitoring method to record the performance of the behaviour
- increasing the student's independence by gradually replacing adult intervention with self-managed student behaviour

- Myles, B.S., and J. Southwick. "Strategies that Promote Self-Awareness, Self-Calming and Self-Management." *Asperger Syndrome and Difficult Moments*, 1999: 61-90. (AS)
- Janzen, J. "Teach Awareness of Self and Others—Self-Control and Self-Management Strategies." *Understanding the Nature of Autism*, 2003: 387-407. (Education)



This intervention often increases social and communication behaviours, as well as other related behaviours. For example, teaching eye contact may improve the student's arm mannerisms, voice volume, and/or body posture during conversation.

7. Peer Mediation and Peer Support

Peers can assist students with ASD in developing social skills. Adult-mediated procedures—those that rely on an adult to evoke or prompt appropriate social behaviour—can disrupt social activities and interfere with social spontaneity. In peer mediation, socially competent students are taught how to initiate and encourage social interactions with their peers with ASD in natural settings.

Using My Quiet Voice: Reproduced from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

Peers are taught how to use specific prompts to initiate and maintain interaction with a classmate with ASD. They can, for example, be taught to initiate "play organizers," such as sharing, helping, and giving affection and praise. Peers can role-play with adults until they have learned strategies successfully, and then they are cued by adults as they interact with their peers with ASD. They may also need help communicating with the student.

In preparation for their role in helping a student with ASD develop social skills, peers should be taught how to

- get the attention of the student with ASD
- present choices of different activities or materials to maintain motivation
- model appropriate social behaviour
- reinforce attempts by the student with ASD to use target social skills
- encourage and extend conversations between themselves and the student with ASD
- encourage social turn-taking

Peers should be praised and encouraged for their efforts, just as the student with ASD is reinforced for demonstrating specific social skills.

Opportunities for meaningful contact with peers may include

- involving the student in shared learning arrangements
- pairing the student with buddies when walking down the hall, on the playground, and during other unstructured times
- varying peer buddies across time and activities to prevent dependence on one student
- involving peers in providing instruction
- arranging cross-age peer supports/buddies by assigning an older student to assist the student with ASD
- pairing peers and students with ASD at special school events such as assemblies and clubs
- facilitating involvement in after-school or extracurricular activities

If the school has an arrangement in which a class of older students is paired with a younger class, ensure that the student with ASD is also paired and provide the necessary supports for success.

Educators and parents may facilitate further social interaction by

- encouraging a friend to play with the child at home
- helping the student join school clubs, with support as needed to participate
- teaching the student to observe others and to follow what they do
- encouraging co-operative games
- modeling how to relate to the student with ASD, and educating other students in the class to do so
- doing projects and activities that illustrate the qualities of a good friend

- helping the student to understand emotions through direct teaching of how to read people's faces and body language and how to respond to cues that indicate different emotions

A final note: Developing specific social skills enables the student with ASD to interact with others in a variety of settings and facilitates the development of social opportunities and relationships. However, students who demonstrate basic social skills with adults may still have difficulty establishing connections and maintaining interactions with peers.

Communication Development

1. Learning to Listen
2. Developing Comprehension
3. Developing Expression
4. Developing Conversation Skills
5. Using AAC Systems
6. Echolalia

Most students with ASD do not develop communication skills without being taught. Developing the communication skills of students with ASD allows for greater independence and potential success in school and community life. A student who is able, for example, to express needs and wants, interact socially, share information, express emotions, and indicate when situations are unpleasant or confusing will have a more positive school experience than a student who cannot.

Janzen, J. "Expand Communication Skills and Options" (341-368) and "Expand Communication and Social Competence" (369-386). *Understanding the Nature of Autism*, 2003.
(Education)

A note on teaching communication skills: There is a great deal of overlap between the development of verbal comprehension, expression, and conversation skills. Strategies described in one section will likely be applicable to the other two as well. Similarly, it is impossible to separate the development of language and communication from other areas of development, such as social skills, cognitive and academic skills, self-help skills, and managing behaviour.

1. Learning to Listen

Students with ASD typically need structured lessons on how to listen. Reinforcing listening efforts, rather than assuming that listening is an automatic behaviour, may be necessary. Breaking listening down into components and reinforcing the student for successful attempts of each component may be helpful—for example, teach the student to face the speaker, look at one spot (which does not necessarily mean making eye contact), and place hands in a planned position. Remember that many students with ASD may listen more efficiently if they do not look at the speaker and/or if their hands are occupied.

The strategies described in Chapter 4 for teaching imitation, waiting before acting, joint focus and attention, and new skills all require a student to learn to listen. These skills are necessary for the development of language and communication and should be considered a crucial component of the student's programming.

2. Developing Comprehension

The strategies for developing focus and attention are useful for developing comprehension skills.

Verbal language comprehension can be taught with structured, formal strategies, or more informally through modeling and other facilitative techniques.

Structured strategies typically involve specified procedures for teaching target vocabulary. An example of a structured approach to developing verbal comprehension is provided on the following page.

For examples of structured programs for developing verbal comprehension, see

- Leaf, R., and J. McEachin. *A Work in Progress: Behavioural Intervention for Young Children with Autism*, 1999.
- Sundberg, M.L., and J. Partington. *Assessment of Basic Language and Learning Skills (the ABLLS): An Assessment, Curriculum Guide and Skills Training System for Children with Autism or Other Developmental Disabilities*, 1998.

(ABA)

This is an example of a structured approach to learning new words ("receptive labels") using behavioural techniques. The adult teaching the student directs the lesson, prompting the student and reinforcing correct responses according to a prescribed procedure, with the intention of reaching specific outcomes. Entry criteria describe the skills the student must demonstrate before beginning this level of training, and mastery criteria describe the behaviours the student must demonstrate to move to the next level.

Receptive Labels

Objectives:

1. Learn the name of objects, activities, and concepts
2. Develop abstract reasoning (for example, making deductions)
3. Facilitate attending skills

Procedure:

Student sits at the table and the teacher sits next to or across from the student. Place two or more objects on the table, spaced well apart from each other. Tell the student, "Touch [item]." Move the objects around after each trial. Many students will get more actively engaged in the task if the response is handing the item to the teacher. In this case, the instruction would be "Give me [item]. " As soon as possible, you should vary the instruction (for example, "Touch…", "Give me…", "Point to…", "Show me…", "Where is…?", etc.). Often, it is possible to omit the command word and simply name the desired item. This may make it easier for the student to zero in on the essential word. Interest can be increased by varying the way materials are presented. For example, the student could go around the room to find the named items or select the item from a Velcro™ board.

Select Objects that Are Motivating and Functional for Student to Learn

Prompts:

Use physical guidance, pointing, or position prompt. Gradually fade prompts until the student is performing the task independently.

Entry Criteria:

Students can correctly match items to be trained or imitate action. Establishing some simple verbal directions can facilitate progress in this program but is not a prerequisite.

Mastery Criteria:

Student performs a response eight out of ten times correctly with no prompting. This should be repeated with at least one additional teacher.

Please note: These strategies should be implemented by a qualified professional or by an appropriately trained person under the direction of a qualified professional.

Receptive labels: Adapted from *A Work in Progress: Behavior Management Strategies and a Curriculum for Intensive Behavioral Treatment of Autism* by Ron Leaf and John McEachin. © 1999 DRL Books. Reproduced by permission.

Informal strategies take advantage of naturally occurring opportunities for teaching new vocabulary. This is particularly useful when a student shows interest in specific objects, people, or situations. Labelling, for example, involves identifying the name of something the student is attending to. The label may be verbal or visual (for example, photograph, line drawing, or print). Through the association of the label with the person or thing, the student learns its name. An example of an informal activity is provided below.

This is an example of a less structured, more informal approach to learning new words. Specific outcomes (taken from General Learning Outcome 2 of the Kindergarten English Language Arts Curriculum) are taught by following prescribed procedure. The activities fit the student's current level of development.

Janice, a Kindergarten student with ASD, participates with her classmates in experiences that demonstrate the special functions of written (and spoken) language each day. At the *Sign-Making Centre*, students create their own labels for objects in the classroom on recipe cards. After a student creates a sign, he or she is joined by the teacher and Janice, and they attach the cards to the corresponding objects. They walk to the appropriate place in the room (for example, a window) and the adult says: "This is the word 'window.' Please help me tape it to the window."

Please note: These strategies should be implemented by a qualified professional or by an appropriately trained person under the direction of a qualified professional.

Incidental teaching is another example of an informal approach to developing verbal comprehension. Incidental teaching involves using events and routines as teaching opportunities. For example, a self-help routine such as washing hands can be used to teach the vocabulary involved in that activity, such as sink, water, taps, soap, towel, etc.

For a description of incidental teaching, see Watson, L.R., et al. *Teaching Spontaneous Communication to Autistic and Developmentally Handicapped Children*, 1989: 84-86. (Communication)

It is a good practice to use visual supports when developing language comprehension. Visual supports aid comprehension of verbal language because they help to obtain and maintain the student's attention. Accompanying spoken language with relevant objects, pictures, and other visual supports may also help with comprehension. Interestingly, many students with ASD use reading to support verbal language comprehension, rather than the expected reverse of using verbal language to support reading. This makes reading instruction even more significant for these students.

When working with students who are higher functioning, do not assume they understand information even if they are able to repeat it. It is always important to check for comprehension. In addition, a student who demonstrates good recall may not grasp the intended meaning. Students with ASD tend to be literal and concrete in their comprehension of language and may need to be taught the meanings of idioms, figures of speech, words with more than one meaning, and so on.

For two volumes that provide black and white visuals and activities to teach concepts, see Mulstay-Muratore, L. *Autism and PDD: Abstract Concepts, Level 1 and Level 2*, 2002.
(Education)

3. Developing Expressive Communication

While many students with ASD may not develop traditional verbal language, most do develop some form of communication. It is important that people involved with the student understand how he communicates, and set realistic expectations for communication.

For students who make few attempts to communicate, the use of *communication temptations* is a powerful way to encourage beginning communication with others. Table 5.1 contains a list of possible communication temptations. It is also useful to search the student's interests for other communication temptations.

Table 5.1: Communication Temptations

1. Eat a desired food item in front of the child without offering any to him or her.
2. Activate a wind-up toy, let it deactivate, and hand it to the child.
3. Give the child four blocks to drop in a box, one at a time (or use some other action that the child will repeat, such as stacking the blocks or dropping the blocks on the floor); then immediately give the child a small animal figure to drop in the box.
4. Look through a few books or a magazine with the child.
5. Open a jar of bubbles, blow bubbles, and then close the jar tightly and give the closed jar to the child.
6. Initiate a familiar social game with the child until the child expresses pleasure, then stop the game and wait.
7. Blow up a balloon and slowly deflate it; then hand the deflated balloon to the child or hold the deflated balloon up to your mouth and wait.
8. Offer the child a food item or toy that he or she dislikes.
9. Place a desired food item in a clear container that the child cannot open; then put the container in front of the child and wait.
10. Place the child's hands in a cold, wet, or sticky substance, such as Jell-O™, pudding, or paste.
11. Roll a ball to the child; after the child returns the ball three times, immediately roll a different toy to the child.
12. Engage the child in putting together a puzzle. After the child has put in three pieces, offer the child a piece that does not fit.
13. Engage the child in an activity with a substance that can be easily spilled (or dropped, broken, torn, etc.); suddenly spill some of the substance on the table or floor in front of the child and wait.
14. Put an object that makes noise in an opaque container and shake the bag; hold up the container and wait.
15. Give the child materials for an activity of interest that necessitates the use of an instrument for completion (for example, a piece of paper to draw on or cut, a bowl of pudding or soup); hold the instrument out of the child's reach and wait.
16. Engage the child in an activity of interest that necessitates the use of an instrument for completion (for example, pen, crayon, scissors, stapler, wand for blowing bubbles, spoon); have a third person come over and take the instrument, go sit on the distant side of the room while holding the instrument within the child's sight, and wait.
17. Wave and say "bye" to an object and remove it from the play area. Repeat this for a second and third situation, then do nothing when removing an object from a fourth situation.
18. Hide a stuffed animal under the table. Knock, and then bring out the animal. Have the animal greet the child the first time. Repeat this for a second and third time, then do nothing when bringing out the animal for the fourth time.

From *Teaching Children with Autism: Strategies to Enhance Communication and Socialization 1st edition* by QUILL. © 1996. Reprinted with permission of Delmar Learning, a division of Thomson Learning: www.thomsonrights.com. Fax 800-730-2215.

For students with limited expression, educators and families should accept verbal attempts and non-verbal behaviour as communicative. A customized interpretation dictionary is a very useful tool in which staff and parents can document what the student says and what is meant, along with planned adult responses to language attempts.

Communication attempts made by students with ASD may be misunderstood or mistakenly ignored. These attempts can be analyzed and recorded in an individualized interpretation dictionary that all people interacting with the student can use. People can refer to the dictionary to help them understand and interpret the student's communication. Planned responses that support language development are assigned to correspond to each attempt, while still acknowledging the attempts. Inappropriate behaviours should be shaped into more appropriate communication attempts.

Interpretation Dictionary

What the student does	What it might mean	How to respond
reaches for food item	asking for the food item	Say "want (food item)" and give the student a small sample of the item.
says the utterance "Boo-chm"	asking for computer time	Point to picture of computer on pictoboard, and say "computer," allow access to computer.
falls prone on the floor	protesting or refusing	Do not respond to the protest, assist student to stand up, saying "stand up," and continue task. (Acting on this protest could reinforce this maladaptive behaviour. Teach appropriate protest communication at another time and reinforce.)

Even those students with ASD who do have verbal language may not add new words to their verbal repertoire easily. Educators and parents will need to teach new vocabulary in a variety of contexts, often using visual supports. To learn and use new vocabulary in a meaningful way, students need to know that

- everything has a name
- there are different ways of saying the same thing
- words can be meaningful in a variety of contexts
- learning to use words will help them communicate their needs and desires

For activities to teach grammar and syntax, social language, and language-based academic concepts, see Freeman, S., and L. Dake. *Teach Me Language*, 1996. (Communication)

Interpretation Dictionary: Adapted from *Teaching Students with Autism: A Resource Guide for Schools*. © 2000 British Columbia Ministry of Education.

Students who rely on pictorial representations to communicate will need to learn that a drawing or representation has a name and can give direction or tell us what to do. Understanding this fact is essential if visual systems are going to provide meaningful communication.

4. Developing Conversation Skills

Virtually all students with ASD have difficulty with the pragmatics of communication—the interpretation and use of language in social situations. Even those who have a good vocabulary and appear to have a command of the language may have a restricted understanding of social and conversational interactions.

Students will need direct instruction and opportunities for social interactions and community-based experiences to practise conversation skills. These experiences and opportunities should include situations that encourage a variety of communicative functions, such as

Janzen, J. "Skills for Social and Communication Competence." *Understanding the Nature of Autism*, 2003: 371-372. (Education)

- requests (for example, for food, toys, or help)
- negation (for example, refusing food or a toy, protesting when asked to do something, or indicating when the student wants to stop)
- commenting (for example, labelling pictures in books, objects from a box, or play activities)

For most students, it will be necessary to teach the verbal language needed for social and communicative play. This can be done by providing structured play opportunities that incorporate the student's interests. Modeling, physical prompts, visual cues, and reinforcement can be used to facilitate attention, imitation, communication, and interaction. To facilitate social communication, structure interactions around the student's activity preferences and routine. Encourage informal and formal communicative social exchanges during the day.

To assist the general development of conversation skills:

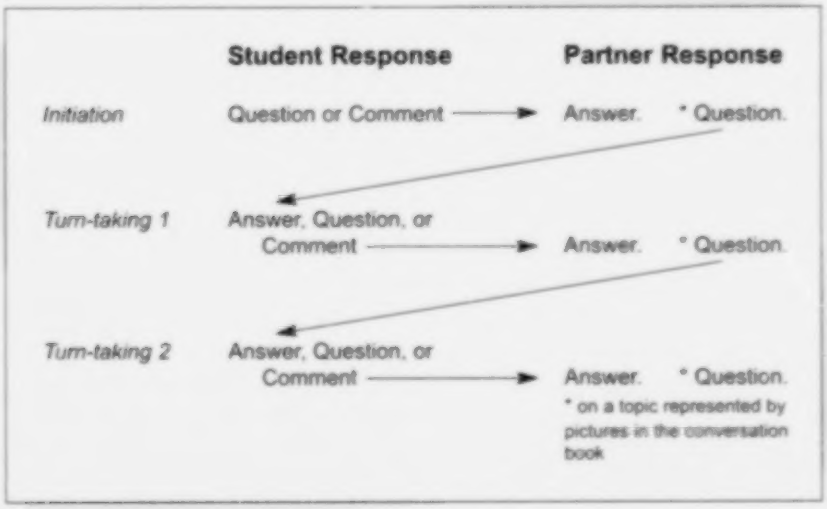
- focus on developing interaction and communication in the environments in which the student participates (for example, the classroom, playground, gym)
- use sentences when talking to the student. Keep in mind that you are modeling speech as well as trying to communicate.
- use vocabulary at the student's comprehension capability. For students with a more severe communication disability, choose familiar, specific, concrete words, and repeat as necessary.
- use language that is clear, simple, and concise. Figures of speech, irony, or sarcasm will confuse students with communication difficulties.
- allow time for the student to process information. It may be necessary to talk more slowly or to pause between words. The pace of speech should depend on the ability of the individual student.

- provide frequent repetition of target items. Students with ASD typically require more time and more practice to learn.

As with verbal comprehension and expression, strategies for developing conversation skills may be formal and highly structured, or informal. Suggested readings referenced earlier in this chapter (for example, Leaf and McEachin, Sundberg, and Watson) also contain descriptions of strategies for developing conversation skills for students with ASD.

Remnant and conversation books contain objects or pictures of activities or things of high interest to the student and serve as a focal point for conversations. The conversation with peers is supported by an adult, who provides prompting and assistance as required. The goal is to keep the conversation moving back and forth, as illustrated in the diagram below.

For a description of conversation books and a description of remnant books, see Beukelman D.R., and P. Mirenda. *Augmentative and Alternative Communication: Management of Severe Communication Disorders in Children and Adults*, 2nd ed. 1998: 316-322.
(Social Relationships)


Student Response
Partner Response
Initiation
Question or Comment
Answer, * Question.
Turn-taking 1
Answer, Question, or Comment
Answer, * Question.
Turn-taking 2
Answer, Question, or Comment
Answer, * Question.
* on a topic represented by pictures in the conversation book

(Pam Hunt, Morgen Alwell, and Lori Goetz. *Conversation Handbook*, 1991: 27.)

Students with ASD have difficulty understanding subtle social messages and rules, and also have problems interpreting the non-verbal communication of others. It may be helpful to provide a concrete rule (when one exists) and to present it visually, either in print or as a more concrete symbol.

The Picture Exchange System (PECS) provides a structured approach to developing communication skills using picture symbols. This approach offers students with ASD a highly visual and concrete opportunity to learn new words, and structured practice in using them in conversational formats.

For a description of the PECS approach and how it is implemented, see

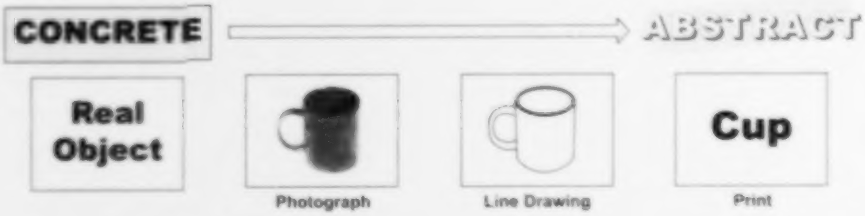
- Frost, L.A., and A.S. Bondy. *The Picture Exchange Communication System: Training Manual (PECS)*, 1994.
- Frost, L.A., and A.S. Bondy. *A Picture's Worth: PECS and Other Visual Communication Strategies in Autism*, 2002. (Visual Strategies)

5. Augmentative/Alternative Communication (AAC)

Augmentative/Alternative Communication (AAC) helps students with ASD who have difficulty using spoken language to communicate. The most commonly used AAC strategies involve using an object, a picture, a line drawing, or a word to represent a spoken word. Students with limited spoken language point to the symbol to communicate to peers and adults.

AAC symbols are selected according to the student's level of cognitive development. A student with a significant cognitive disability will likely do better with more concrete symbols, such as real objects or photographs. A student who does not have a cognitive disability may be able to use line drawings or words. In many cases, students will use a combination of symbols.

Manitoba Education and Training. *Foundations for Augmentative and Alternative Communication: A Decision-Making and Assessment Tool*, 1995.



Please note: Put the word and the visual symbol together to stimulate the student's reading potential.

AAC is important for students with ASD because

- communication is a significant challenge for all students with ASD, ranging from students who are non-speaking to students who have difficulty with the subtleties of language and its use
- AAC uses visual symbols, which tap into the visual learning strengths of students with ASD
- AAC allows students to communicate more successfully, which typically results in improvements in social interaction and behaviour, and reductions in anxiety and resistance

The decision to use AAC with a student with ASD should be made by the team after considering the student's profile and his priority learning needs. The team will need to have current information about the student's level of development in the area of

- communication skills (for comprehension and production of spoken language)
- cognitive skills (for selecting symbols that the student will be able to understand)
- fine motor skills (for pointing to symbols)
- visual skills (for perceiving the symbols)

For more information on AAC for persons with ASD, see the special issue of *Focus on Autism and Other Developmental Disabilities*, 16, 3, Fall 2001.
(Communication)

Please note: AAC typically stimulates the potential for spoken language in students with ASD; it will not hinder the acquisition of spoken communication.

6. Echolalia

Some students with ASD demonstrate echolalia, the literal repetition of words or phrases they have heard other people say. Echolalia can be immediate (the student repeats what was just heard) or delayed (repeated later, sometimes many months or years later). For young students with ASD, echolalia may be part of how their language develops.

In some situations, immediate echolalia may be used as a strategy to teach more appropriate spoken language. If a student echoes questions, for example, it may be possible to tie a meaningful consequence to echoed speech, as in this exchange at snack time in a Kindergarten room.

Adult: [holding up juice container]: "May I have juice?"

Student: [echoes] "May I have juice?"

Adult: [gives juice to student]: "Sure. Here it is."

Delayed echolalic utterances may have no obvious meaning for the listener. For example, a student with ASD may repeat television commercials word for word. To understand the possible function of the echolalia, it is helpful to think of it as a chunk of language that has been stored without regard for meaning.

A situation or emotion may trigger the echolalia, even if it seems to have no connection to the situation. For example, if a student echoes the script from a soft drink commercial it may mean he is thirsty or does not know how to request something to drink. However, a logical connection for some delayed echolalic utterances may never be discovered. When possible, try to determine what has elicited the echolalia and teach the appropriate language to use for that situation. It is important not to assume that the student understands the content of the echolalic speech being used.

For more information see Rydell, P.J., and B. Prizant. "Assessment and Intervention Strategies for Children Who Use Echolalia." *Teaching Children with Autism*, 1995: 105-132.
(Communication)

Restricted Repertoire of Activities, Interests, and Behaviours

1. Reduce or Replace Repetitive Behaviours
2. Help the Student Learn to Manage Distractions
3. Take Advantage of the Behaviours for Instruction

Restricted and repetitive behaviours such as rocking and spinning may serve an important function for the student with ASD. For example, a student may demonstrate these behaviours to

- block out unpleasant sensory stimulation (for example, loud noises, bright lights)
- get adult attention
- avoid certain tasks, situations, or people

For an article on "Restricted Repertoires in Autism and What We Can Do About It", see <www.iidc.indiana.edu/irca/education/restrict.html>

It may not be a good use of instructional time to eliminate a particular behaviour, considering all the skills a student typically needs to learn. Often, if a student is prevented from doing one type of behaviour, another will take its place because the student has an underlying need to perform the behaviour.

While many such behaviours cannot be totally eliminated, there are strategies that help to lessen their impact on the student and his learning:

1. reduce or replace repetitive behaviours
2. help the student learn to manage distractions
3. take advantage of the behaviours for instruction

1. Reduce or Replace Repetitive Behaviours

For reducing or replacing repetitive behaviours, consider

- teaching an alternative behaviour that is related, but more socially acceptable
- providing a variety of sensory experiences during the day
- trying to divert the student's attention to another activity when the behaviour is happening
- negotiating when and where the repetitive behaviours are acceptable. Designated times (and settings) to perform the behaviours may reduce the need to engage in it.
- gradually reducing the amount of time allotted for the behaviour. Increase the amount of time between scheduled times for repetitive behaviours.
- using the level of repetitive behaviour to assess the student's level of stress and teaching him more appropriate ways to manage it
- allowing the student to engage in the behaviours in an emergency situation to calm down

2. Help the Student Learn to Manage Distractions

Students with ASD may be taught to recognize sources of distraction and learn to manage them. For example, a student may

- use earplugs or headphones to reduce the impact of background noise
- move to a desk in an area of the classroom that is free of visual distractions
- approach an adult for assistance

3. **Take Advantage of the Behaviours for Instruction**

   There are ways to take advantage of the behaviours for instruction. For example, if the student uses the repetitive behaviour to calm down, it may be appropriate to teach other methods of relaxation that provide the same sensory feedback. For some students, it may be appropriate to find another source of stimulation that may satisfy the sensory need.

   For a student interested in numbers, put numbers on the steps of tasks or on surprise envelopes or containers to be opened. A student interested in collecting license plates can do a project on provinces or states or different makes and models of cars. A student who collects facts and statistics and loves game shows can create a Trivial Pursuit™ game with questions and answers on a classroom unit, and be the quiz master when the game is played in class.

   Sometimes, the behaviours may be used to motivate the student. Students with ASD who like to rock their bodies or spin objects can do a task and then enjoy the sensation for a brief time. Those who like to line up objects can tidy shelves in the library. Those who like to complete puzzles can earn puzzle pieces for tasks and have a few minutes to add pieces to the puzzle between subjects.

Associated Features

1. Unusual Responses to Sensory Stimuli
2. Anxiety
3. Resistance and Anger Management
4. Limited Problem-Solving and Independence
5. Scattered Developmental Profile

The associated features of ASD, while not included in the official diagnosis, will be present in varying degrees in most students with ASD. This section offers strategies for addressing the impact of the associated features of ASD on the student.

Associated features are additional characteristics that are present to different degrees in most students with ASD. They include

- abnormal responses to sensory stimuli
- anxiety
- resistance and anger management
- limited problem-solving and independence
- scattered developmental profile

1. Unusual Responses to Sensory Stimuli

Students with ASD may be hypo-sensitive, hyper-sensitive, or both to different stimuli. For example, they may pull away from light touch but not appear to notice a skinned knee. They may also show reactions one day but not the next.

Table 5.2 provides a summary of strategies to address abnormal responses to sensory stimuli.

For additional information on sensory integration and suggestions for activities and strategies, see

- Hong, C.S., H. Gabriel, and C. St. John. *Sensory Motor Activities for Early Development*, 1996.
- Haldy, M., and L. Haack. *Making It Easy*, 1995.
- Kranowitz, C. *The Out-of-Sync Child*, 1998.
- Williams, M.S., and S. Shellenberger. *Take Five!*, 2001.
- Yack, E., S. Sutton, and P. Acquilla. *Building Bridges through Sensory Integration*, 1998.

(Sensory/Self-Regulation)

Table 5.2: Sensory Systems: Common Difficulties and Strategies

COMMON DIFFICULTIES WITH SENSORY SYSTEMS	
AUDITORY	
Hypo-Reactive Behaviours	**Strategies**
• does not distinguish speech from other environmental sounds • does not respond to name being spoken • seems oblivious to sounds of surrounding activities • creates constant sounds as if to stimulate self, such as echoing TV jingles or repeating sounds he enjoys such as "looks like a slippery snake" • has difficulty distinguishing between similar sounds such as 'make' and 'rake' • uses voice that is too loud or too soft or with atypical rhythm • unsafe because does not react to sounds indicating potential danger	• ensure hearing has been assessed • use game situations to teach him to recognize and respond to his name • directly teach the names of a few key people, objects in his environment, action words, positional/directional words, and other phrases commonly used by teachers or peers • sensitize him to the source of sounds in his environment—music, toys, faucets, machines—and teach him how to control them • teach new or difficult material in setting with no other sounds • experiment to see what particular sounds or vocal highlighting such as animation, tone of voice, or volume are alerting or reinforcing: practise in one-to-one settings and transfer to classroom • develop alerting signal which means "important, pay attention" and train child to respond with educational assistant in low-stimulation setting and then with teacher in classroom • teach a few simple signs and use them with spoken words to help child focus attention • use touch to get child's attention and direct it to speaker • when giving directions, get attention, use few words, wait for processing, supplement with gestures or visuals • use audio-taping and videotaping to teach volume control of voice • teach child to focus attention on person speaking to whole class rather than waiting for one-to-one repetition from assistant • if possible, seat child close to where teacher usually stands or sits to talk when listening is required • practise with role-playing to help student connect sounds to possible dangers • to teach sound discrimination, use visuals and rules to support learning

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

AUDITORY

Hyper-Reactive Behaviours	Strategies
• easily distracted by background sounds • over-reacts or reacts unpredictably to quiet or everyday environmental sounds • holds hands over ears or presses fingers in front of ears to block sound • responds physically as if sound is a threat • becomes anxious in anticipation of unpleasant sounds • repeats all background sounds in environment as low murmur • has difficulty looking and listening at same time	• sensitize others to student's reactions to loud or unexpected noises and prevent provocation • modify environment as possible with carpeting, tennis balls on chair legs, etc. • provide earplugs or earphones to muffle noise when student is working independently rather than listening, or when in noisy settings such as music class, assemblies, gym • warn of noises coming such as bell, fire drill, buzzing VCR monitor • teach student to recognize and screen distracters • give frequent breaks from noisy setting; try occasional whole-class 15-minute whisper breaks • give student a way to let you know when he's overloaded • use gradual desensitization to increase tolerance for sound • allow student to listen with eyes closed or while looking at desk; let him see and feel materials before or after lesson • gradually teach listening and looking at same time since it is an important skill; start in 1:1 setting

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

VISUAL

Hypo-Reactive Behaviours	Strategies
• seems unaware of the presence of other people • unable to locate desired objects, people • loses sight of people or objects when they move • can't distinguish figure-ground relationships (can't find the book that is "right there in front of him") • can't draw or copy what he sees • has difficulty with eye-hand coordination and changing focus (copying from board or overhead) • has difficulty with spatial awareness (bumps into people or objects rather than moving around them, can't judge distance) • has difficulty tracking (looking where someone is pointing, following a line of print, catching a thrown ball) • may stare intently at people or objects without blinking	• consult with occupational therapist • ensure vision has been assessed • provide student with frequent chances to look at new and interesting things, and teach him to use vision to find small objects or items in busy pictures • experiment with angled rather than flat reading/writing surface • increase contrast by letting child use a dark mat on which to count objects, circling problems to be done, boxing or highlighting areas on a page such as instructions, etc. • keep board organized with lines or space between different writing and locate items such as homework assignments or daily schedule in a consistent place • teach student to scan worksheets or other reading materials to locate instructions, key words, answers to questions • keep classroom materials in consistent place, and involve child in re-arranging if necessary • photocopy reading materials and let student use highlighter to identify words, answer questions, etc. if student can't locate them visually • experiment to find optimum amount of work to present visually at one time (for example, cutting cardboard screen to reveal only one line of print at a time); when using overhead, uncover one line at a time • use visual strategies to organize work, increase reliance on environmental prompts, etc. • teach child to shift attention visually rather than fixating; try a written script to explain how to do this, and how people feel when someone stares too long

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

VISUAL

Hyper-Reactive Behaviours	Strategies
• disturbed by bright or flickering indoor lighting or glare • covers eyes or squints to avoid sunlight • follows any movement in the room with eyes • blocks field of vision with hands • covers part of visual field—puts hands over part of the page in a book • responds physically to appearance of certain objects • responds physically as if movement of people or objects in environment is a threat • avoids looking directly at people or objects; prefers to use peripheral vision	• sensitize everyone in student's environment to student's over-sensitivity to light • adjust seating/lighting to minimize glare; let child wear baseball cap or visor if that helps shield from glare • experiment with angled rather than flat reading/writing surface • use visual limits to define his space—a carpet square to sit on, a tape boundary for his space at a table, a tape line to mark classroom travel patterns • keep classroom materials in consistent place, and involve child in re-arranging if necessary • use visual strategies to organize work, student's belongings, and environment, and to increase reliance on environmental prompts • reduce visual distractions such as bulletin boards or homework assignments in area where student needs to look most frequently, especially when listening • teach student to recognize and screen distracters (sunglasses or hat for outside, using hands as blinders, placing folders or cardboard on desktop) • experiment to find optimum amount of work to present visually at one time; when using overhead, uncover one line at a time • keep blackboard clear and uncluttered, draw lines or use coloured chalk to highlight writing on board • provide low-stimulation area for seatwork such as study carrel, desk facing wall, or out-of-class setting • provide occasional breaks from a visually stimulating setting; in classroom, try drawing blinds and turning off lights periodically • seat student in front, closest to where teacher usually stands, rather than at back of class • try some behavioural techniques; identify need for student to ignore visual distracters and focus on task, provide reinforcement each time student is observed doing this, decide together on "celebration" when he reaches a set goal • for young children, hold objects child likes closer and closer to your face to help him tolerate eye contact and facial expressions

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

TACTILE

Hypo-Reactive Behaviours	Strategies
• does not seem to notice touch of others when used to get his attention • touches other people and objects to get information • seeks deep touch, such as bear hugs, back rubs, rough play • wants to touch surfaces and materials which give strong feedback, such as hot, cold, rough, sharp • frequently puts things into mouth or explores environment by licking walls, door frames, desks • chews collar or clothing • does not adjust clothing which would seem to be an irritant, such as tight elastic or shoes on wrong feet • seems unaware of "mess" on face or hands • high pain threshold, unaware of danger because of low response to pain • may have poor tactile discrimination and be unable to identify objects or textures by touch • does not seem to grasp concept of personal space; constantly stands too close to another person when talking	• consult with occupational therapist to identify sensory diet of calming, alerting, and desensitizing strategies to improve child's ability to register, process, and tolerate touch • experiment to see kind and frequency of sensory input needed by child throughout day • give ample opportunity for oral stimulation (crunching ice, chewing gum, blowing bubbles, mouthing specific objects which are kept separate and cleaned regularly with scent-free non-toxic soap) • provide bandana or plastic tubing around neck to replace chewing on clothing • develop child's ability to explore using other senses than oral • help him use other senses such as visual to improve ability to discriminate by touch • call child's attention to injuries and teach rules for proper care

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

TACTILE

Hyper-Reactive Behaviours	Strategies
• touch defensive—does not like to be touched, especially light touch or touch which he can't see coming	• consult with occupational therapist to identify sensory diet of calming, alerting, and desensitizing strategies to improve child's ability to register, process, and tolerate touch
• may use back of fingers or nails or palm or heel of hand or other body part to touch, hold or move objects, or will only use fingertips rather than palms	• sensitize everyone in student's environment to his over-sensitivity to touch
• when child is distressed, touch or affection aggravates rather than calms or reassures	• provide touch or massage to palms and fingers before child needs to use them for manipulatives, printing, etc.
• has difficulty lining up because of fear of being touched from in front or from behind	• find ways to comfort child or for him to comfort himself; this may involve deep touch or pressure or other relaxation techniques
• resists hand-washing, having hair, face or body washed, teeth-brushing, being touched by towels or washcloths, swimming	• place desk away from traffic path in class
• avoids tasks with strong tactile element (clay, glue, playdough, sand, water play, paint, food preparation)	• consult with parents to ensure clothing is comfortable and washed with non-irritating detergent; try removing labels from clothing, wearing socks inside out
• complains about discomfort of certain kinds of clothing, elastic, seams or labels, and tugs at clothes or wiggles constantly	• experiment to find best arrangements for lining up, using hallways and lockers, removing outerwear, bathroom and hygiene issues
• refuses to wear certain items—wants to wear shorts year round or wears only long pants, pushes up snowsuit sleeves to keep arms exposed or wears heavy long sleeves in hot weather to prevent feeling of air moving on skin	• try using social stories with illustrations to explain need for specific outdoor wear and shoes, procedures for lining up, responding to minor injuries, etc.
• refuses to go barefoot or insists on bare feet at all times	
• responds negatively to textures in foods, toys, furniture	
• reacts excessively to minor touch such as a raindrop or leaf touching his arm, or to small hurts such as a scrape, and may continue to remember and talk about the injury	

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

VESTIBULAR and PROPRIOCEPTIVE

Hypo-Reactive Behaviours	Strategies
• seems to need constant movement of some part of body; rocks or fidgets; can't stay still • seeks out stimulating motor activities such as merry-go-rounds, moving toys, swinging, being whirled by adult; seems to like feeling of being dizzy • may take excessive risks (jumping from high places, hanging from trees) or seek out dangerous activities for the thrill • may deliberately bump or crash into objects or people • may use too much pressure to pick up or hold objects, tie laces, print, touch a pet, hit computer keys, manipulate switches, turn doorknobs • may have difficulty with tasks when he can't see what he is doing (dressing, putting on glasses or earphones) or when he must watch in a mirror (combing hair, brushing teeth) • may have difficulty orienting body for activities such as putting arms in sleeves, toes in socks • may have difficulty with motor planning, including smooth coordination of desired gross or fine motor movements or of speech • may have difficulty with bilateral tasks such as using scissors, knife and fork	• consult with occupational therapist to identify sensory diet of calming, alerting, and desensitizing strategies • consult with physical education teacher for activities to improve strength, stamina, balance, coordination, motor planning, and awareness of body in space • ensure child is seated in desk with feet on floor or raised surface • experiment with seating child on gel cushion on desk or on therapy ball to provide movement while seated • let child use fidget object or teach him clench-and-release muscle exercises he can do while seated • experiment to see if active movement before sedentary activity improves child's tolerance and attention • use frequent activity breaks, even within classroom—doing chores, handing out materials, putting finished papers on teacher's desk one at a time, etc. • let child do some activities while standing • experiment with weighted cuffs or vests

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

VESTIBULAR and PROPRIOCEPTIVE

Hyper-Reactive Behaviours	Strategies
• over-reacts to or avoids movement activities • has difficulties navigating on different surfaces (carpets, tile, grass, etc.) • walks close to wall; clings to supports such as banisters • seems to be fearful when movement is expected; muscles seem tense; may lock joints • avoids or is poor at activities in which both feet aren't on the ground such as stairs, climbing ladders, jumping rope, escalators, bike-riding • has difficulty with activities involving linear movement such as swinging, bike-riding • avoids or is poor at activities which require running, changing direction or coordinating actions with other people, such as most sports • is afraid of heights, even small ones such as a curb • rigid about positioning of body, keeps head in same rigid angle • seems to become physically disoriented easily, avoids activities such as somersaults, leaning over sink or table, bending to pick up something from the floor or to tie shoes • may use too little pressure to pick up objects or hold materials, tie laces, print, hit computer keys • may have difficulty with motor planning, including smooth coordination of desired gross or fine motor movements or of speech • if muscle tone is low, leans on others for support as if they were furniture, "W-sits" on floor to stabilize, props head on hands at desk or table, flops rather than sits, always want to lean against wall if standing • may have difficulty with seated tasks requiring two hands because of need to support head and trunk with one hand • seems to tire easily when engaged in movement activities	• consult with occupational therapist to identify sensory diet of calming, alerting, and desensitizing strategies • sensitize everyone in student's environment to his over-sensitivity to touch • consult with physical education teacher for activities to improve strength, stamina, balance, coordination, motor planning, and awareness of body in space • help child to sit on floor with legs crossed rather than in W-sit, or use chair • experiment to see if active movement before sedentary activity improves child's tolerance and attention • use frequent activity breaks, even within classroom—doing chores, handing out materials, putting finished papers on teacher's desk one at a time, etc. • experiment with weighted cuffs or vests

COMMON DIFFICULTIES WITH SENSORY SYSTEMS

TASTE

Hypo-Reactive Behaviours	Strategies
• eats a limited variety of foods • gags, refuses foods • difficulties with oral hygiene • spits out foods, medications • smell-defensive—will avoid places or people with strong odours, such as art or science rooms, lunchroom, residue from cleaning chemicals in classrooms • reacts to odours that other people don't notice (the smell of coffee on someone's breath) or odours that other people usually like (flowers, perfume, air freshener)	• consult with occupational therapist to identify ways to desensitize mouth area and improve function of teeth, gums, cheeks, and lips • collaborate with parents to develop ways to desensitize child to a wider variety of foods • collaborate with parents to develop ways to increase tolerance for tooth-brushing • provide nose plugs in classroom or lunch area to help child manage smells, or provide alternate eating area

Hyper-Reactive Behaviours	Strategies
• wants food constantly • licks objects or people in the environment • chews on or mouths objects inappropriately • high threshold for bad tastes, so doesn't avoid danger substances • has pica (mouths or eats non-food substances such as rocks or dirt) • sniffs objects and people in unusual ways or wants to stand close to others in order to smell them • does not seem to notice smells others notice	• ensure child has been assessed for related conditions • consult with occupational therapist to identify ways to desensitize mouth area and improve function of teeth, gums, cheeks, and lips and provide sensory diet of smelly materials • try to identify specific food or taste child craves and ensure it is in regular diet • teach rules about eating without permission, and/or teach recognition of hazard icons and/or keep all dangerous substances locked away

2. Anxiety

Parents and teachers of students with ASD frequently identify anxiety, and a student's ability to manage it appropriately, as a major challenge to attention, learning, and successful functioning in school and home. A student may show anxiety, for example, by shutting down and refusing to communicate or follow instructions, or by acting out aggressively.

Rief, S. "Relaxation, Guided Imagery and Visualization Techniques." *How to Reach and Teach ADD/ADHD Children*, 1993: 125-129.
(Sensory/Self-Regulation)

Direct observation of the student often provides clues to sources of anxiety and to behavioural or verbal cues that signal its effect on the student. When possible, asking the student to identify what makes him anxious can provide insights into the source of difficulty.

Sources of anxiety are highly individual and often unique to students with ASD. Some common causes include

- transitions and changes in routines or settings (expected or unexpected)
- environmental factors such as noise or movement
- inability to understand and meet social expectations
- fear of failure
- inability to meet academic expectations

To help young students manage anxiety using visual techniques, see

- Buron, K.D., and M. Curtis. *The Incredible Five-Point Scale: Assisting Students with Autism Spectrum Disorders in Understanding Social Interactions and Controlling Their Emotional Responses*. 2003.

(Sensory/Self-Regulation)

Ensure the availability of a trusted helper.

Ensure the student has a trusting, comfortable relationship with more than one person. If the student has a high social drive or is very dependent on adults, ensure that he has enough social interaction prior to starting a task, and has opportunities for successful social interactions with adults and with peers throughout the day.

Ensure the student has an appropriate communication system (gestural/visual/verbal) and knows how to use it.

Difficulty communicating may create anxiety. An appropriate AAC system will enable a student to communicate more effectively and with less stress.

Information from family and other caregivers, and direct observation and assessment by a speech-language pathologist, will provide the school team with information about a student's communication abilities and needs.

Everyone who interacts with the student needs to be aware of how the student understands best and expresses himself.

Assume that the student does not understand what is expected unless he has demonstrated understanding and capability.

It is easy to make assumptions, based on the student's age or skills in some areas, that he can do a particular task or understands social expectations. Students with ASD frequently have a very irregular profile of skills and function very differently on different days or in different situations. An academically competent student may struggle with a simple task such as responding appropriately to someone who greets him in the hallway, or with a more complex task such as locating an item in a store or starting a conversation with a peer.

Give clear, brief instructions using demonstrations or modeling whenever possible. Help the student understand the "why" of the situation, using social stories or role-playing when applicable.

Check comprehension of instructions or conversations.

Adults working with the student should develop strategies to check comprehension and help the student show, by paraphrasing or demonstrating, that he has understood. Peers can observe the adult's strategies and imitate them, and can learn to interpret the student's communications.

Seat the student next to someone who is a good "buddy" when appropriate. Teach the student how to communicate to this person when he needs help.

Ensure task expectations are appropriate.

Support the student to complete tasks and meet expectations at his ability level to give him a sense of accomplishment and confidence. Ensure that tasks have a clear beginning-middle-end and that reinforcers are clear and provided as frequently as necessary. Debrief after each success, review with the student what he did right, and praise perseverance and completion.

Help the student to set reasonable goals that he can meet, such as "copying three sentences that are dictated" or "getting 80% on the spelling pre-test." Ask the student to compare his performance to previous efforts rather than to the work of others.

Fact-based assignments are more likely to be successful than tasks that require creativity, imagination, or empathy. These are challenging areas for students with ASD who have difficulty understanding that others have different perspectives, motivations, and knowledge than they do.

If the student needs frequent breaks, adjust the length or difficulty of tasks so they can be completed in a manageable period. Ensure that the student returns to the task and is reinforced for completing it.

Use written and/or graphic cues to remind the student of tasks and expectations.

Not knowing what to expect can be anxiety producing. Clear visual cues can provide a picture for the student. Use graphic or written cues to remind student of

- expectations (for example, how many times to write each spelling word)
- strategies to problem-solve (for example, raise hand for help, put head down on desk and cover ears when it is too noisy)
- strategies to communicate in problem situations (for example, "I don't understand, I can't do it, What do I do when I'm finished?")

For line drawings of students and school situations that are adaptable to fit many students, see Street, A., and R. Cattoche. *Picture the Progress*, 1995. (Social Relationships)

Adjust activity levels to match student needs.

Be sensitive to the impact of tiredness, under-stimulation, low muscle tone, or too much sedentary time without breaks.

It may be necessary to have a calm, quiet area where the student with ASD can go to manage sensory or emotional overload. Relaxation for some students may mean engaging in repetitive behaviours that have a calming effect. Students who crave certain repetitive movement activities, such as rocking, spinning objects, or becoming immersed in activities of perseverative interest, can be provided with a time and space where this activity is permitted.

Students who crave active play and physical contact often profit from regular periods of exercise and gross motor activity several times daily. This can occur in the gym, in hallways as appropriate, in a vacant classroom, or on the playground. Activities can include hallway aerobics, step exercises, weights, practising skills with balls or ropes, etc.

Movement can be incorporated into the classroom by giving the student reasons to be out of his desk. Sensory experiences can be incorporated into regular learning activities as tasks (finding objects or word cards buried in containers of rice) or as reinforcers (access to vibrating toy, playdough).

Provide a structured, predictable environment.

The need for structure, routine, and predictability exists in all settings for a student with ASD. Strategies that are useful at school may also be useful in home and community settings. At the same time, a student needs to learn to be flexible and to tolerate small variations to the routine in order to become comfortable with the changes that are normal parts of everyday life.

For suggestions to manage typical sources of anxiety within a school day, see Moore, S.T. "Anxiety." *Asperger Syndrome and the Elementary School Experience*, 2002: 132-150. (AS)

Students with ASD can become dependent on a routine very easily and insist that an event that happened one way must always happen in exactly the same way. For example, a student may demand that the same activity be done every time he goes to gym, or may expect always to be the first to enter the classroom because he went first once. These subtle routines are often easy to overlook.

A student with ASD may also interpret one event as having caused another and expect the association to continue, such as expecting the fire alarm to ring when a substitute teacher is in class because that happened the last time there was a substitute teacher.

Unexpected changes in the environment may confuse a student with ASD. Prepare the student ahead of time for physical rearrangements in the classroom, and involve him in making the changes if possible.

Provide a customized visual daily schedule.

All planned activities can be charted in a visual form and posted at or near the student's desk, so that he can anticipate changes in activities and know what to expect. The schedule should be used consistently. Staff should direct the student's attention to the schedule by gesture when necessary and ensure that the student learns to use the schedule with increasing independence.

Please note: The purpose of visual supports is to increase the student's ability to function without continuous adult prompting. Visual supports provide the student with a prompt system that has the potential to allow him to function with as much independence from adults as possible. Adults must teach the student to use the visual support and then let the student use it.

Plan for transitions and learn to manage change.

Tools that can be used to prepare students for changes in activity or setting include

- visual schedules
- verbal reminders
- social stories

These tools help students to manage the stress of changes in schedule or of personnel, such as the computer class being unavailable or the presence of a substitute teacher.

Once a student has learned the daily routine or can follow a schedule, begin to introduce small changes regularly. Use the visual schedule plus other communication systems to warn of changes in activities or personnel, and give reasons. Reinforce the student for managing the changes.

Help the student to recognize and manage his own anxious or overstimulated state.

As a student with ASD develops more awareness and better communication skills, he can learn to recognize and take responsibility for managing his arousal level and feelings. Teach the student to name a feeling by identifying body language or facial expressions. Ask the student to name two or three of the feelings in his body, such as a hard feeling in the stomach or head.

To help young students manage anxiety using visual techniques, see Buron, K.D. *When My Autism Gets Too Big: A Relaxation Book for Children with Autism Spectrum Disorders*, 2003. (Sensory/Self-Regulation)

Help the student learn a few physical and verbal strategies to calm down. These can include, among others:

- taking a series of deep breaths, holding and releasing them
- counting slowly to a particular number
- visualizing something pleasant or visualizing the body returning to a calm state
- referring to picture/written cue cards to remind him what to do
- reading or repeating to himself a verbal script for calming or reassuring
- expressing feelings by drawing
- storing preoccupations on an imaginary computer disk and not thinking about them again until a specified time or until a certain task is completed

Cautela, J.R., and J. Groden. *Relaxation: A Comprehensive Manual for Adults, Children and Children with Special Needs*, 1978. (Sensory/Self-Regulation)

Additional strategies for managing sensory sensitivities may be found in the "Sensory Systems: Common Difficulties and Strategies" chart in Table 5.2.

Handle verbalized anxiety calmly and move on.

Students with ASD can be very preoccupied with repetitive worries about family issues ("What if my dad loses his job?") or environmental concerns triggered by television or newspaper coverage of hurricanes, floods, or other disasters. The student may have a poor sense of relative time or distance and may feel in personal jeopardy. He may find it difficult to focus on anything else and may try to talk about the preoccupations or repeatedly seek adult reassurance.

Try to avoid reinforcing the anxiety with too much reassurance or discussion, or letting the student use it as a way to avoid tasks. Provide a brief, matter-of-fact response and then move back to the task or change the subject.

Accept that the student may always show some level of anxiety.

Typically developing students differ in their tolerance for change and in their general level of anxiety. Students with ASD may be more prone to anxiety for many reasons, and some may always react with mild to severe anxiety about changes of personnel or settings or routine, no matter how carefully and systematically transitions have been planned. When appropriate, acknowledge that changes are sometimes difficult. Continue to look for strategies that support the student, and reinforce him when a situation is managed well.

3. Resistance and Anger Management

School is a stressful place for many students with ASD. The student may resist task expectations because he fears failure, can't express confusion, or because the emotional and intellectual effort doesn't seem worthwhile. What most typically developing students find motivating, such as socializing with friends, excelling at academics, or enjoying sports, may not motivate students with ASD.

For the student with ASD, attempts at social interaction may consistently meet with failure. Meeting academic expectations may be difficult and be a source of low self-esteem. Anger and resistance, like anxiety, may build over time and lead to withdrawal or outbursts. The strategies in the previous section for helping the student deal with anxiety may help with resistance and anger management. This section provides specific suggestions for dealing with resistance and anger.

See Appendix C for information about positive behaviour support for students with ASD.

- See Myles, B.S., and J. Southwick. *Asperger Syndrome and Difficult Moments*, 1999 for a much more detailed discussion of strategies for handling tantrums and meltdowns and a variety of useful forms for doing functional assessments of behaviours and settings, and a description of the Situation, Options, Consequences, Choices, Simulation, Strategies (SOCCSS) approach. (AS)
- Also see Janzen, J. "Evaluate and Refine to Support Effective Learning and Behavior." *Understanding the Nature of Autism*, 2003: 157-169 and 443-465, and "Assess and Plan Interventions for Severe Behaviour Problems." (Education)

Observe patterns of anger build-up and intervene as early as possible.

Brenda Smith Myles and Jack Southwick identify three stages of the rage cycle in *Asperger Syndrome and Difficult Moments*:

- rumbling
- rage
- recovery

They stress the importance of developing a proactive written plan for managing rage attacks so that all staff are aware of their roles and expectations.

Table 5.3: The Rage Cycle

Rumbling Stage	**Strategies**
Decrease in ability to process verbal language, increase in body tension, tapping fingers or clenching fists, argumentative or confrontational behaviour, verbal outbursts, name-calling, task refusal.	Know the signs. Try to intervene without becoming part of a power struggle. Point to visual cues to remind of schedule or reinforcers or to indicate choices when student needs break in task or change of setting. Encourage student to move to out-of-classroom setting before he or she loses control. Keep voice quiet and calm.
Rage Stage	**Strategies**
Student may bolt from area, shout, throw or rip materials, aggress verbally or may withdraw and shut down emotionally; student is out of his or her own or others' control.	Keep voice quiet and calm, or do not speak at all. As required, use physical intervention and get assistance to remove student from area, to protect other students, or to remove other students. Help student go to familiar, safe place to calm down. Learn by trial-and-error what helps student calm; this may include darkening the room, remaining silent or playing quiet music, letting student do a calming activity such as drawing, etc.
Recovery Stage	**Strategies**
Student may deny that the event occurred or be sad, apologetic, and/or physically exhausted.	When student is completely calm, use the social autopsy approach. Using a written format if possible, help student recall what occurred, what he or she wanted to happen, how he or she felt, how he or she thought others were affected, what to do next time, etc.

Adapted from *Asperger Syndrome and Difficult Moments: Practical Solutions for Tantrums, Rage, and Meltdowns* by Brenda Smith Myles and Jack Southwick.
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<www.asperger.net>

Be prepared for difficult days.

A student may arrive at school resistant and angry because of events that happened at home or on the way to school. When this occurs, provide the student with his usual structure and routines but with reduced task difficulty and more frequent breaks (if necessary). Start the day with some time to calm down in a quiet space, and begin the day's routine when the student has settled sufficiently. This will allow the student an opportunity to maintain control of his behaviour and hopefully get through the day without a major incident.

Note aspects of tasks and activities that create frustration.

Resistance or anger in a student with ASD may occur during instruction for a number of reasons, including

- a cognitive disability
- difficulties with language comprehension and following instructions
- difficulties with language expression (such as asking for help)
- limitations in problem-solving skills
- an inability to compromise
- a tendency to be a perfectionist

When a student with ASD shows resistance or anger, it is necessary to determine whether task expectations are realistic (considering his individual profile). It may be necessary to adjust expectations, instructional strategies, and in some cases the educational setting, to bring them in line with the student's abilities.

Persevere with reasonable expectations for task completion.

The student with ASD needs to have many experiences with successful task completion in order to connect following directions with positive consequences and social feedback from others.

Adults in home, school, and community environments often inadvertently reinforce tantrum behaviours by removing a student from a particular setting or withdrawing task demands. A student with ASD learns patterns very quickly, and may learn to use tantrums or "meltdowns" as an easy and successful channel of communication.

Remember to reinforce efforts and improvements, however slight, on a frequent basis so that the balance of interaction between the student and adults is positive rather than negative. Model this for peers so that they learn to do it as well.

Help the student to cope.

Egocentricity, difficulty interpreting non-verbal communication, and poor understanding of social interaction often lead to confusion, hurt feelings, and anger for a student with ASD. A student may over-personalize situations and interpret rejection or anger from a peer when none was intended.

A student may become a target for ridicule or bullying by peers. Peers may do this subtly, such as using a word to which the student always reacts negatively, or suggesting that a student do or say something which others know will get the student in trouble with someone else.

Classroom- and school-wide positive school climate programs should teach appropriate skills and make it clear that ridicule or bullying will not be tolerated.

- Duke, M.P., and S. Nowicki. *Helping the Child Who Doesn't Fit In*, 1992.
- Duke, M.P., S. Nowicki, and E. Martin. *Teaching Your Child the Language of Social Success*, 1996.

(Social Relationships)

- Garrity, C., et al. *Bully-Proofing Your School*, 1998.

(Education)

Students who are able to recognize and manage their own anxiety can also be taught to recognize the beginnings of anger and to release it in appropriate ways. Strategies for anxiety may also work for anger and resistance.

Build the student's self-esteem.

Identify a student's strengths and do everything possible to boost his self-esteem. Emphasize the student's abilities and accomplishments, rather than letting him dwell on comparisons with others.

- Find activities that the student does well and give him many chances to do them.
- Put the student in an "expert" role, such as using factual knowledge to be part of a small group making up Trivial Pursuit™-style questions on a classroom curricular unit, or presenting an interesting collection of facts to a class of younger children, or using artistic talent in various ways throughout the school.
- Allow an older student to be a helper in Kindergarten or Grade 1, using his strengths to interact with children or to help with classroom maintenance chores.
- Let the student assist with other tasks as appropriate, such as helping the librarian with seasonal displays or shelving books, helping the gym teacher set up and take down stations, helping the computer teacher with routine chores, or demonstrating tasks to younger children.
- Tell the student when he does anything well. Use an objective phrase such as "that went well" so that he learns not to take all successes and failures personally. Praise the student and specify what he did that went well. Teach the student some catch-phrases to use, and make a game of having him practise using the skill.
- Help the student to not expect perfection in everything. He could set different goals for different activities or subjects, such as "I'll try to get 80% on the pre-test" or "I'll aim for 75% on that test because it's my hardest subject" or "I'll try to get 10 problems done before recess and maybe if I'm really fast I can get 12 done."
- Help the student to set goals that are benchmarks toward a larger goal, so that he can learn to reach successes bit by bit rather than seeing only complete success or complete failure.

Provide opportunities for meaningful contact with peers who have appropriate social behaviour.

Most students without ASD are willing to come to school for a variety of social reasons, in addition to meeting parental expectations. Perhaps school is where they see their friends, socialize during class or recess, or perhaps they enjoy attention from the adults. Academic and other kinds of achievement often are esteem-building experiences as well.

These kinds of social reinforcers are less available to students with ASD, and accordingly it is important to build connections between them and their peers and to provide reasons for them to want to come to school. It will be necessary to teach appropriate social behaviours and to provide students with situation-specific expectations for behaviour.

Provide regular access to a supportive communication relationship.

High-functioning students with adequate verbal skills may benefit from being able to talk regularly to someone in the school environment who is not normally involved in instruction or behaviour management. This person could be a resource teacher, guidance counsellor, or psychologist. The time spent with this person might be used to summarize events of the day or to debrief after difficult situations.

4. Limited Problem-Solving and Independence

Students with ASD often experience difficulty with problem solving and functioning independently. Important skills in problem solving, such as the ability to interpret information, attend to important information and screen out distractions, plan, organize, and sequence events, are typically lacking in students with ASD. As a result, students with ASD may rely on adult assistance to solve problems and complete tasks.

These common skills are difficult for students with ASD, whether the problems are organizational, interpersonal, or academic.

Some students become skilled in using passive problem-solving styles and become reliant on adult assistance or attention. They may resist expectations that they learn and apply active problem-solving strategies or that they do any task with increased levels of independence.

Increased independence is an appropriate goal for all students. Educational planning for students with ASD should address problem-solving and increased independence.

This section provides strategies for developing problem-solving skills and independence.

Teach flexibility.

Introduce small changes to routine regularly, using appropriate visual/verbal strategies to warn the student of the upcoming changes. Acknowledge to the student that managing change is hard, and provide praise as necessary.

Model and acknowledge "making mistakes" or "changing your mind" in natural and structured situations. Have peers do this as well. This gives the student a chance to see other people coping rather than excelling, and demonstrates that mistakes can often be fixed.

Work into conversations casual references to weaknesses and imperfections, his own and others, in order to highlight that these are normal and acceptable parts of everyone's life.

In one-to-one sessions and in the classroom, brainstorm responses to difficult situations in the student's daily life. This will encourage the student to generate many possible solutions to a problem and help him to overcome rigidity and the belief that there is only one right way to do anything.

Problem-solve in natural settings.

To improve a student's problem-solving ability, adults need to avoid the temptation to prevent problems from developing. The process below outlines steps in a process to support a student to learn how to manage difficult situations. This process must be used cautiously; it is important to provide enough support to help the student learn without accidentally frustrating him.

- let natural problems develop
- let the student become aware of the problem and name it if possible
- let the student try a variety of strategies
- reinforce the student for every success, telling him what was done right
- if the student is unsuccessful, show him a strategy and prompt as necessary
- if the student is verbal, give him a simple script to use, such as "Put the key in, turn it all the way, push the door."
- encourage the student to echo and tally steps on fingers if possible, so that he learns to talk himself through the problem
- ensure the student has many opportunities to practise strategies in different settings

Model problem-solving and encourage peers to model.

Adults can model problem-solving in a calm and structured way throughout the day, and peers can be encouraged to do the same. It could become a class activity to find good problem-solving strategies in stories, videos, or class situations and to identify examples of good problem-solving and why it was successful.

Teach the student to use a graphic format as well as spoken words to problem-solve.

Teach the student to use a written problem-solving approach, rather than just talking the process through. As an alternative, have the student draw or cut out small pictures and physically manipulate them to express "what happened?" and "what can I do next time?"

Help the student follow routines more independently.

Adults working with students with ASD may unintentionally foster dependence by providing too many prompts, or by prompting too quickly. Teach the student to use a written problem-solving approach. If a student requires prompts to go through every step of a familiar routine, try

- using a visual or graphic script (such as a sequence of pictures for dressing or a written list of steps for an academic task), and teaching the child to use it
- waiting longer before prompting or reminding

Table 5.4: Levels of Independence

	School	Community
Independent	Student with motor skills adequate to push door approaches door, pushes it open, and goes through.	Student approaches clerk in a fast-food restaurant and responds to the natural prompt of "Can I take your order please?" by using a verbal or visual system to communicate wishes.
Verbal Prompt	Student does not respond to natural prompt. Adult says "Push the door."	Student does not respond to natural prompt. Adult says, "Tell her what you want."
Motor Prompt	Student does not respond to natural or verbal prompt. Adult gets student's attention and points to the door.	Student does not respond to natural or verbal prompt. Adult gets student's attention and points to clerk or points to or taps visual communication system.
Physical Prompt	Student does not respond to other prompts. Adult jogs the student's elbow, puts student's hand on door, or provides hand-over-hand support to push door open.	Student does not respond to other prompts. Adult jogs the student's elbow, puts student's hand on communication board, or provides hand-over-hand support to use AAC system.

See Table 4.2 for a more elaborate prompt hierarchy.

Determine the student's level of on-task behaviour and task completion, and reasons for difficulty.

There are many possible reasons for a student failing to comply with a task expectation or not remaining on task long enough. The task may be beyond the student's ability, or he may lack internal or external motivation to do it. He may not be able to screen distractions or may have learned that the best way to keep an adult engaged is to require constant prompting.

Ensure that adult attention and interaction remain available as the student improves in independence and on-task behaviour.

Students with ASD typically interact most successfully with adults, who can adjust their style of communication and interaction to the student's needs. Students may rely on this social interaction for pleasure and for reassurance and security.

A student who enjoys adult attention will not work toward increased independence or on-task behaviour if he learns that the consequence is reduced adult attention. It is important to ensure that the student learns, in small increments, that adult interaction can be contingent on accomplishing rather than on failing to accomplish.

5. Scattered Developmental Profile

As a group, students with ASD demonstrate a range in levels of intellectual development. A student with ASD may have a cognitive disability or normal intelligence. A cognitive disability, like ASD, may range from mild to severe and have a significant impact on a student's ability to learn.

As well, the developmental profile of a student with ASD will be uneven. One student may show an average level of intelligence but be significantly affected by abnormal responses to sensory stimuli, communication impairment, or anxiety. Another student may show deficits in some areas of development and strong skills in another.

Some students with ASD may appear to be more able than they are because they have good skills to decode written material, extremely strong rote memories, and sophisticated vocabularies or other areas of high function.

In Middle Years, as social and academic environments become more complex and abstract, students who succeeded academically in Early Years often begin to encounter difficulties with learning. This may be especially troubling for a student who sees being smart and doing well as an essential part of his identity, and confusing for teachers and parents who have not realized how much the child has relied on a good memory and excellent vocabulary to succeed.

Appendix B contains suggestions related to needs of students with Asperger's Syndrome. Many are also applicable to students identified as "high functioning."

Help students with ASD to understand and accept themselves and their differences.

For students able to comprehend verbal or written information, discuss with parents the process of explaining to their child the ways in which he is like many others and the ways in which he is different.

This is often done in a classroom or with the student individually in the context of discussing the idea of individual differences. The adult might note that everyone has some areas in which they naturally excel without having to try hard, such as being a good runner or a good speller. Everyone has some areas in which they can improve if they work hard at it, such as playing piano or skating. And everyone has some areas in which they will probably never excel, no matter how hard they try. Some students, for instance, have difficulty learning certain school subjects, or in saying what they are thinking, or in making friends. Emphasize that people usually value other people as friends or as part of their family not only because of what they can do but because of how they act toward other people, by listening, helping, being reliable, being considerate, etc.

In an individual session, explain to the child that he has a learning disability. Be clear that this learning problem makes things harder but not impossible, and that everyone will continue to help him. The label of Autism Spectrum Disorder can be introduced if the child indicates by questions that he is ready for additional information.

For a comprehensive approach to explaining ASD to more able students, see Faherty, C. *What Does It Mean to Me? A Workbook Explaining Life Lessons to the Child or Youth with High Functioning Autism or Asperger's Syndrome*, 2000.
(Explaining)

After consultation with the parents, the student's difficulties may be explained to his classmates. In some classrooms this discussion happens naturally year by year, in the context of a general unit on disabilities or differences, whether or not the classroom that year includes children with a particular disability.

Another approach is described by Carol Gray in *The Sixth Sense II* (2002.) It is designed for students aged 7-12 and is more comprehensive than its predecessor, originally published as part of *Taming the Recess Jungle* (1993).

Using this lesson plan, an adult discusses how our five senses work similarly for most but not for all of us, and then introduces the sixth or "social" sense. This sense lets some but not all of us understand social rules and how to send and receive social messages by means such as facial expression, body language and gesture, and tone of voice, without needing to be taught directly.

Activities in the lesson plan help students find ways to support a classmate with an impairment in vision or in hearing, and then expand to help them think of ways to support a classmate whose sixth or "social" sense doesn't work well.

Ensure that the IEP reflects the student profile.

It is tempting to assume that a student who demonstrates strengths in one area can achieve equally well in all areas if he tries hard and is constantly challenged. It is equally tempting to prioritize meeting curricular objectives to the exclusion of setting goals in areas of communication and social skills.

IEP outcomes should recognize the child's individual profile of strengths and weaknesses, learning style, and need to master skills for communication, interaction, and academic learning.

For many practical, class-based suggestions, see

- Moore, S.T. *Asperger Syndrome and the Elementary School Experience*, 2002: 47-92 and 93-130.
- Myles, B.S., and R. Simpson. "Teaching Academic Content to Students with Asperger Syndrome." *Asperger Syndrome: A Guide for Educators and Parents*, 1998: 43-68.

(AS)

- Janzen, J. "Concepts, Rules and Academic Skills." *Understanding the Nature of Autism*, 2003: 313-340.

(Education)

Help the student learn to use rote memory more efficiently.

Rote memory is often a strength for students with ASD. It is often helpful to teach the student how to use this strength effectively and efficiently.

- In a small group and in one-to-one or casual situations, help the student to repeat back, perhaps by tallying on his fingers, the key points of what the adult has said or what the instructions were. When the student can do this aloud, help him to do it silently or by whispering. Reward success with praise and concrete rewards, points, or whatever motivates the student.
- In a small group and then in a classroom setting, help the student learn to write down key words or main points of verbal instructions and information.
- Help the student learn to store facts under different headings by memory or in writing (for example, under a character's name, under a job title, or other identification) so that the student becomes more comfortable with different but equally correct ways to remember.

Emphasize comprehension over rote memory.

Rote memory is a typical area of strength for a student with ASD. Comprehension of the memorized material, however, may be lacking. Many students with ASD are able to read text, but may understand little of what they have read.

It is important to build reading comprehension by emphasizing meaning along with saying the words. Before reading begins:

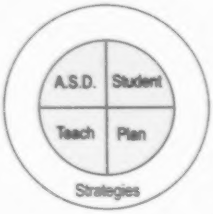
- attempt to connect the material with the student's knowledge or previous experiences
- talk about illustrations in the book
- provide a brief overview of the material
- ask questions that involve drawing conclusions and making predictions

- **Please note:** Don't assume the student understands key words or concepts or is able to transfer something learned from one setting to another. It may be necessary to pre-teach key words.

After the student has read the material, encourage him (according to age, level, and ability) to summarize main ideas, describe the setting, the characters and their action, etc.

Strategies to develop comprehension can include

- reading independently to identify any words with an unclear meaning, and asking for an explanation
- locating specific information within a few pages, gradually increasing the number of pages and decreasing the picture cues
- going back over a story the student has read to locate answers to questions such as "who said?" and numbering events in sequence
- restating the main idea of a paragraph, section, or chapter
- using newspapers, TV guides, directions on packages, restaurant menus, ads and flyers, and instructions for construction activities such as models
- teaching where to look on a worksheet or test for instructions, rather than assuming the student understands what to do from the appearance of the problem or question
- teaching the student to use visual supports, including written timetables on the board, an individual schedule on his desk, steps for a task itemized in point form, colour coding for mandatory vs. choice tasks, a written journal of events of the day to take home, and graphic organizers to help the student retain and organize information
- encouraging students with ASD to use questions to ask about word meanings and other aspects of what they read and hear, even if you need to write the questions and let them read them
- teaching students with ASD how to get an adult's attention, to ask for help, and to show or explain what they don't understand
- using hands-on experiential learning (when possible) to help the student understand the meaning of new words and experiences and to see pieces of new information fit together



At this stage, the team is ready to

☐ select appropriate instructional strategies

☐ incorporate knowledge about ASD and the student's profile into implementation

☐ adjust strategies according to student progress

APPENDICES

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Appendix B: Asperger's Syndrome *7*

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APPENDIX A: DSM-IV-TR *DIAGNOSTIC CRITERIA*

Diagnostic Criteria for Autistic Disorder

The essential features of Autistic Disorder are the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests. Manifestations of the disorder vary greatly depending on the developmental level and chronological age of the individual. Autistic Disorder is sometimes referred to as *early infantile autism, childhood autism,* or *Kanners autism.*

A. A total of six (or more) items from 1, 2, and 3, with at least two from 1, and one each from 2 and 3:
   1. qualitative impairment in social interaction, as manifested by at least two of the following:
      a. marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
      b. failure to develop peer relationships appropriate to developmental level
      c. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (for example, by a lack of showing, bringing, or pointing out objects of interest)
      d. lack of social or emotional reciprocity
   2. qualitative impairments in communication as manifested by at least one of the following:
      a. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gestures or mime)
      b. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
      c. stereotyped and repetitive use of language or idiosyncratic language
      d. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
   3. restricted, repetitive, and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:
      a. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

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  b. apparently inflexible adherence to specific, nonfunctional routines or rituals
  c. stereotyped and repetitive motor mannerisms (for example, hand or finger flapping or twisting, or complex whole-body movements)
  d. persistent preoccupation with parts of objects

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

Rett's Disorder

Rett's Disorder, also referred to as Rett syndrome, is a condition that is found only in females. Physical and mental development are essentially normal for the first six to eight months of life. This is followed by a slowing or cessation in achieving developmental milestones. By 15 months of age, about half of the children with Rett syndrome demonstrate serious developmental delays. By age 3, there is generally a rapid deterioration of behaviour evidenced by loss of speech and excessive levels of hand patting, waving, and involuntary hand movements (Van Acker, 1997).

A. All of the following:
  1. apparently normal prenatal and perinatal development
  2. apparently normal psychomotor development through the first 5 months after birth
  3. normal head circumference at birth

B. Onset of all of the following after the period of normal development:
  1. deceleration of head growth between ages 5 and 48 months
  2. loss of previously acquired purposeful hand skills between ages 5 and 30 months with the subsequent development of stereotyped hand movements (for example, hand-wringing or hand washing)
  3. loss of social engagement early in the course (although often social interaction develops later)
  4. appearance of poorly coordinated gait or trunk movements
  5. severely impaired expressive and receptive language development with severe psychomotor retardation

Childhood Disintegrative Disorder

For individuals with CDD, there may be several years of reasonably normal development followed by a loss of previously acquired skills. In approximately 75% of cases, the child's behaviour and development deteriorate to a much lower level of functioning. The deterioration stops, but there are minimal developmental gains past this point in the progression of the disorder. In addition, there is the development of various autistic-like features (Volkmar, Klin, Marans, & Cohen, 1997).

A. Apparently normal development for at least the first 2 years after birth as manifested by the presence of age-appropriate verbal and nonverbal communication, social relationships, play, and adaptive behaviour.

B. Clinically significant loss of previously acquired skills (before age 10 years) in at least two of the following areas:
   1. expressive or receptive language
   2. social skills or adaptive behaviour
   3. bowel or bladder control
   4. play
   5. motor skills

C. Abnormalities of functioning in at least two of the following areas:
   1. qualitative impairment in social interaction (for example, impairment in nonverbal behaviours, failure to develop peer relationships, lack of social or emotional reciprocity)
   2. qualitative impairments in communication (for example, delay or lack of spoken language, inability to initiate or sustain a conversation, stereotyped and repetitive use of language, lack of varied make-believe play)
   3. restricted, repetitive, and stereotyped patterns of behaviour, interests, and activities, including motor stereotypes and mannerisms

D. The disturbance is not better accounted for by another specific Pervasive Developmental Disorder or by Schizophrenia.

Asperger's Disorder

Asperger's Disorder has many features common to autism. The distinguishing criteria are that there are no clinically significant delays in early language development and no clinically significant delays in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour, and curiosity about the environment in childhood.

A. Qualitative impairment in social interaction, as manifested by at least two of the following:
   1. marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
   2. failure to develop peer relationships appropriate to developmental level
   3. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (for example, by a lack of showing, bringing, or pointing out objects of interest to other people)
   4. lack of social or emotional reciprocity

B. Restricted, repetitive, and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:
   1. encompassing preoccupation with one or more stereotyped and restricted patterns of interest, that is abnormal either in intensity or focus
   2. apparently inflexible adherence to specific, nonfunctional routines or rituals
   3. stereotyped and repetitive motor mannerisms (for example, hand or finger flapping or twisting, or complex whole-body movements)
   4. persistent preoccupation with parts of objects

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.

D. There is no clinically significant general delay in language (for example, single words used by age 2 years, communicative phrases used by age 3 years).

E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction), and curiosity about the environment in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

Pervasive Developmental Disorder/Not Otherwise Specified (Including Atypical Autism)

This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction, associated with impairment in either verbal or nonverbal communication skills or with the presence of stereotyped behaviour, interests, and activities, but the criteria are not met for a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder. For example, this category includes "atypical autism"—presentations that do not meet the criteria for Autistic Disorder because of late age at onset, atypical symptomatology, or subthreshold symptomatology, or all of these.

APPENDIX B: ASPERGER'S SYNDROME

How to Use this Appendix

This appendix provides the team an overview of Asperger's Syndrome. Students with Asperger's Syndrome (AS) share many of the primary characteristics and associated features of ASD described in Chapter 1. The profile of a student with AS, however, is sufficiently different from the typical profile of a student with ASD to warrant the additional information provided in this appendix. The information about AS should be used as the team moves through the planning process outlined in Chapters 1 to 5. The appendix concludes with a summary of common areas of difficulty experienced by students with AS, and teaching strategies.

Asperger's Syndrome

The disorders which would come to be called Autism and Asperger's Syndrome were first described by clinicians in the United States and in Vienna in the early 1940s.

Dr. Leo Kanner, trained in Vienna, emigrated to the United States where he became head of the Johns Hopkins clinic in Baltimore. In 1943 he gave the name "early infantile autism" to a type of disorder not previously identified. He described the disorder as a distinct clinical entity, characterized by a profound lack of affective contact with other people, an obsession with sameness, unusual preoccupation with objects, and impairment of verbal and non-verbal communication.

In 1944 Dr. Hans Asperger in Vienna described the same disorder and gave it a similar name. His paper, "Autistic Psychopathy," reflected his interest in more subtle impairments such as clever-sounding but unusual and pedantic use of language, lack of humour, and isolated exceptional abilities. Asperger's work was published in English in 1981 by Lorna Wing.

Students with Asperger's Syndrome (AS) have many of the characteristics of Autism Spectrum Disorder as described in Chapter 1. According to *DSM-IV-TR* criteria (Appendix A), a diagnosis of Asperger's Syndrome requires

- qualitative impairment in social interaction
- restricted, repetitive, and stereotyped patterns of behaviour, interests, and activities
- clinically significant impairment of social, occupational, or other areas of function
- no clinically significant general delay in language development
- no clinically significant delay in cognitive development or in development of age-appropriate self-help or adaptive skills

For suggestions on assessment of students with AS, see

- Cumine, V., et al. "Assessment and Diagosis." *Asperger Syndrome: A Practical Guide for Teachers,* 1998: 5-17.
- Myles, B.S., and D. Adreon. "Assessment of Adolescents with Asperger Syndrome." *Asperger Syndrome and Adolescence*, 2001: 25-58.
- Myles, B.S., J. Simpson, and J. Carlson. "Assessing Students with Asperger Syndrome." *Asperger Syndrome*, 1998: 13-41.

(AS)

Students who are significantly impaired by ASD are typically identified well before school entry. Those with Asperger's Syndrome, by contrast, often have appeared to parents to be especially self-sufficient and independent children who are bright, verbally sophisticated, and show early interest in letters, numbers, and facts. The child's difficulties with social interaction and communication, rigidity, and anxiety may not become apparent until well after school entry.

It may be particularly difficult both for parents and teachers to accept that the child whom they have seen as exceptionally skilled and able requires student-specific support.

Social Understanding and Interaction

Individuals with AS may be highly motivated to relate to others but may not have the skills to do so successfully. They frequently lack understanding of social customs and expectations and may appear socially awkward, have difficulty with empathy, and misinterpret social cues. They may learn "scripts" for conversations and social interaction but have difficulty reading others' reactions and modifying their scripts to fit specific situations. They are poor incidental learners and need explicit instruction in social understanding and interaction.

For ideas on social skill development, see

- Moore, S.T. "Developing Social Skills." *Asperger Syndrome and the Elementary School Experience: Practical Solution for Academic and Social Difficulties*, 2002: 134-187.

  (AS)
- Janzen, J."Expand Communication and Social Competence." *Understanding the Nature of Autism*, 2003: 369-386.

  (Education)

A common characteristic of persons with AS is difficulty carrying on social conversations. They may have advanced vocabulary and talk incessantly about a favourite subject. The topic will often be narrowly defined and the person may have difficulty switching to another topic or reading the reaction of his listener.

This is often due to problems with understanding the listener's non-verbal communication (or "body language") that sends subtle messages to the speaker, such as boredom with the topic of conversation. For example, looking away from the speaker and shifting restlessly communicates to the speaker that the listener wants to end the conversation or say something back, but the student with AS may not perceive this.

Students with AS often have the same difficulty as other students with ASD in understanding that others have perceptions, thoughts, and feelings different from their own. This inability to "see through another's eyes" is called by some clinicians the absence of a "theory of mind." For instance, a student may interpret the teacher's failure to call on him, even after he had raised his hand as required, as "the teacher is mad at me." Another student may become angry when a peer does not understand his spoken language because he knows what he is trying to say and cannot understand that his articulation or word usage prevents the peer from understanding.

For discussion of the impact of theory of mind on social understanding and interaction, see

- Cumine, V., et al. *Asperger Syndrome: A Practical Guide for Teachers*, 1998.

  (AS)
- Winner, M.G. *Thinking about You, Thinking about Me*, 2002.
- Winner, M.G. *Inside Out: What Makes a Person with Social Cognitive Deficits Tick?*, 2000.

  (AS)

Temple Grandin, who designs livestock handling facilities and teaches university courses, taught herself how and when to apply social rules by using her intellect and strong visual skills. She devised this personal rule system to help herself navigate the social world and guide her behaviour.

- *Really Bad Things* – examples: murder, arson, stealing, lying in court under oath, injuring or hitting other people. All cultures have prohibitions against really bad things because an orderly, civilized society cannot function if people are robbing and killing each other.
- *Courtesy Rules* – examples: not cutting in on a line at the movie theatre or airport, table manners, saying 'thank you' and keeping oneself clean. These things are important because they make the other people around you more comfortable. I don't like it when somebody else has sloppy table manners so I try to have decent table manners. It annoys me if somebody cuts in front of me in a line so I do not do this to other people.
- *Illegal but Not Bad* – examples: slight speeding on the freeway and illegal parking. However, parking in a handicapped zone would be worse because it would violate the courtesy rules.
- *Sins of the System (SOS)* – examples: smoking pot and being thrown in jail for 10 years and sexual misbehaviour. SOSs are things where the penalty is so severe that it defies all logic. Sometimes the penalty for sexual misbehaviour is worse than for killing somebody. Rules governing sexual behaviour are so emotionally based that I do not dare discuss the subject for fear of committing an SOS. An SOS in one society may be more acceptable in another; whereas rules 1, 2, 3 tend to be more uniform between different cultures. (Grandin, 1999)

For other first-person and parental accounts, see

- Special issues of *Focus on Autism and Other Developmental Disabilities*, 15(4) Winter 2000 and 16(1) Spring 2001.
- Cohen, S. *Targeting Autism*, 1998.
- Shopler, E. and G. Mesibov. *High Functioning Individuals with Autism*, 1992.

(AS)

Communication

Although children with AS usually speak fluently by the time they enter Kindergarten, they often have problems with the complexities of language, including

- pragmatics (the use of language in social contexts)
- semantics (multiple meanings)
- prosody (the pitch, stress, and rhythm of speech)
- understanding and using non-verbal communication

It is often difficult for adults and peers to understand how a child can have strong language skills and sound "bright," yet show severe difficulties in completing class work or interacting socially. It is easy to interpret this inconsistency as wilful non-compliance or deliberate attention-seeking behaviour.

Students with AS may have better expressive than receptive language skills; they may be able to use sophisticated vocabulary which they have memorized as individual words or as "chunks" and learned to use in appropriate contexts, yet fail to understand words used in everyday conversation and instructions. Even a student whose language skills are typically strong will show reduced ability to understand and to communicate when anxiety or emotions run high. The student may know and be able to articulate rules for social behaviours and anger management but not be able to access and apply these skills before responding with words or actions.

Associated Characteristics

Students with AS do not display significant delays in cognitive development and appear quite capable. The student with AS may be relatively proficient in the knowledge of facts, particularly about a subject that absorbs him. The same student may demonstrate relative weaknesses in comprehension and abstract thought, in the ability to attend to and retain any information not of special interest to him, and in social cognition.

Consequently, the student with AS usually experiences difficulties with

- reading comprehension
- problem solving
- concept development
- making inferences and judgements
- applying knowledge or skills
- executive functions (planning, organizing time or tasks, starting and stopping)
- distinguishing reality from fantasy
- perceiving danger

In addition, these students often have difficulty with cognitive flexibility (that is, their thinking tends to be rigid) and with adapting to change or failure. They do not readily learn from their mistakes and may repeat one problem-solving strategy many times rather than trying an alternative.

The student with AS is often intolerant of his own imperfections, real or perceived, and intolerant of others who make mistakes or do not follow rules precisely. He may become so upset about an item in a textbook that is not one hundred percent grammatically or factually correct that he can't continue a task. He may frequently correct adults and peers on matters of fact, grammar, or spelling.

For ideas on teaching flexibility, see

- Moore, S.T. *Asperger Syndrome and the Elementary School Experience*, 2002: 142-146.
  (AS)
- Dalrymple, N. "Environmental Supports to Develop Flexibility and Independence." *Teaching Children with Autism*, 1995: 243-263.
  (Social Relationships)

> "In first grade the class was directed to print the letters of the alphabet. As I printed them, I drew complete letters on the paper, copying as I had seen them in newspapers and books. The teacher and everyone else in the class only drew line figures of letters, and I thought I was in a room full of non-conformists, who drew incomplete letters as though they were right and the whole world was wrong. I also noticed that whenever other children drew pictures, they drew stick figures that looked nothing like people. This I could not understand."
>
> —Vincelette, Barry. "My Early Years." *Focus on Autism and Other Developmental Disabilities*, 15(4) Winter 2000, 236-238.

Motor Skills

Students with AS frequently experience problems with motor coordination. The affected areas may include locomotion, motor planning, low muscle tone, balance, manual dexterity, handwriting, rapid movements, rhythm, and imitation of movements.

In school, students with AS may show difficulty with

- printing or handwriting
- using two hands together or stabilizing material with one hand
- copying material from books, the blackboard, or an overhead
- cutting, pasting, gluing
- folding papers or putting materials into three-ring binders
- moving around the classroom
- handling equipment
- remaining seated for long periods
- dressing/undressing
- sports, gym, recess

Responses to Sensory Stimuli

Students with AS may show the same range of hyper-sensitivity and hypo-sensitivity to auditory, visual, or other sensory stimuli as other students with ASD described in Chapter 1.

See Myles, B.S., et al. *Asperger Syndrome and Sensory Issues: Practical Solutions for Making Sense of the World*, 2000.
(AS)

Attention, Distractibility, Anxiety

Many students diagnosed with AS are inattentive and easily distracted and have received a diagnosis of Attention Deficit/Hyperactivity Disorder at one point in their lives. Distractions may be external, such as movement, light, or noise, or internal, such as perseverative thoughts and interests or emotional distress or perfectionism. Anxiety is also a characteristic associated with AS. It may be difficult for the student to understand and adapt to the social demands of school. The student may see that he reacts differently than his peers do to language, humour, or non-verbal and social communication. Appropriate instruction and support can help to alleviate some of the stress.

Strategies for Teaching Students with Asperger's Syndrome

Some of the strategies for teaching students with ASD may be applicable to students with AS. However, it is important to consider the unique learning characteristics of the individual student, provide support when needed, and build on the student's many strengths.

The following chart identifies some specific learning difficulties and suggests a number of possible classroom strategies, adapted from a variety of sources in the literature.

For planning and teaching academic and other content, see

- Moore, S.T. *Asperger Syndrome and the Elementary School Experience: Practical Solutions for Academic and Social Difficulties*, 2002: 47-86 and 93-132.
- Myles, B.S., and D. Adreon. *Asperger Syndrome and Adolescence*, 2001.
  (AS)
- Janzen, J. *Understanding the Nature of Autism*, 2003.
  (Education)

Area of Difficulty	Strategies
Language and Communication • understanding complex language and understanding intent of words with multiple meanings, sarcasm, humour, figures of speech, slang, non-verbal communication	• note difficulties with language comprehension; remediate on the spot and then practise intensively 1:1 or in small group • do whole-class exercises so student sees that other people understand things in different ways • explain metaphors and words with double meanings
• following directions	• teach student to recognize confusion and to seek assistance; encourage student to ask for an instruction to be repeated, simplified, or written down • pause between instructions and check for understanding • limit oral questions to a number the student can manage • teach student to ask questions as well as to answer them
• speaking with unnatural rhythm/rate/inflection/tone • speaking pedantically and formally ("little professor")	• use audio-taped and videotaped conversations between student and others • watch videos to identify non-verbal expressions and their meanings
• in classroom setting or in conversations, bores or frustrates others by interrupting, talking off-topic, talking only about topics of personal interest, resisting attempts to change the subject	• use 1:1 or small group settings to teach rules and cues regarding conversations, including opening remarks, turn-taking, and when to reply, interrupt, or change the topic • use *Comic Strip Conversations* (Gray, 1994) to teach conversation skills related to specific problems
• correcting others' vocabulary and grammar	• use social stories and role-playing to explain how others react to correction; try to reduce number of corrections or have student write them down for later discussion

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Area of Difficulty	Strategies
Social Interaction • has difficulty understanding the rules of social interaction and reasons for them • comprehension of verbal and non-verbal communication is poor • has difficulty understanding own emotions or reading the emotions of others • has difficulty understanding that others know different things and feel differently • has difficulty understanding "unwritten rules" and once learned, may apply them rigidly • can't understand or predict others' reactions or the impact on others of his own actions • is competitive and perfectionistic, seeing winning as the only reason to interact • keeps trying to interact or make friends but failing, leading to anger or depression • hasn't developed a repertoire of age-appropriate leisure skills to serve as vehicles for interaction, such as card or board games	• provide clear expectations and rules for behaviour • teach (explicitly) the rules of social conduct • teach the student how to interact through social stories, modeling, and role-playing • educate peers about how to respond to the student's disability in social interaction • use other students' actions as cues to indicate what to do • encourage co-operative games • provide supervision and support for the student at breaks and recess, as required • use a buddy system to assist the student during non-structured times • teach the student how to start, maintain, and end play • teach flexibility, co-operation, and sharing • teach the student how to monitor his own behaviour • structure social skills groups to provide opportunities for direct instruction on specific skills and to practise actual events • provide adequate pleasant adult interaction • look for other students with similar interests and pair them • teach age-appropriate activities • teach relaxation techniques and provide a quiet place to go to relax • involve other professional support regarding anger and depression as required
• lacks awareness of personal space	• model and practise appropriate personal space

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Area of Difficulty	Strategies
Rigidity, Need for Sameness • inflexible, rigid style, can't adjust to small changes in classroom physical structure, changes in routines, differing expectations from different teachers	• prepare the student for potential change, wherever possible • use pictures, schedules, and social stories to indicate impending changes
• preoccupied with details and precise factual correctness, and with following rules and ensuring that everyone else does as well	• teach flexibility by introducing small changes regularly and modeling "making mistakes and correcting them" and "changing one's mind" so that student has many trials to learn to cope with changes and learns that he can manage • help student to accept the best answer for the task or from the text, even if not 100% correct
• may be so distracted by obsession with correctness that he can't stay on task or be redirected from talking or ruminating about concerns	• set time period daily for student to debrief about frustrations and insist on completion of tasks within reasonable time periods
• may resist anything new, anytime it is introduced	• acknowledge difficulty and persevere
Attention and Motivation • only interested in a narrow range of topics or activities • resists learning anything new or unrelated to his interests	• limit perseverative discussions and questions • incorporate and expand on interests in activities
• more motivated by own mental perseverations or by being in control than by any activity or any external reinforcer	• set firm expectations for the classroom, but also provide opportunities for the student to pursue his own interests
• no pride in accomplishment or obsessive concern for competition or comparison with others	• provide frequent feedback and redirection • encourage student to compete with himself rather than others
• has difficulty screening distractions to focus on teacher's voice or task at hand	• use non-verbal cues to get attention • break down assignments • use visual organizers, semantic mapping, and outlining • provide timed work sessions • reduce homework assignments • place student at the front of the classroom for group instruction but use a less distracting work setting for seat work

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Area of Difficulty	Strategies

Organizational Skills
• anxiety because tasks or settings seem overwhelming
• difficulties with managing space, time, personal possessions, assignments, classroom materials
• impulsive and easily distracted
	• provide physical predictability with a regular seat and work space, and warn or involve student in rearrangements
	• use box inside desk or additional space to organize belongings, and require weekly tidying
	• provide routine predictability by warning of changes and regular transitions
	• use visual strategies to help organize work, decrease anxiety, increase reliance on environmental prompts rather than adult assistance, and foster independence. Visual supports can include
	  • individual schedules for day/week/month on desk/in binder/in locker
	  • steps for tasks, itemized in point form
	  • colour coding for different subjects, mandatory vs. choice tasks
	  • graphic/written cards to remind of strategies, rules
	  • home-school communication log listing homework, items needed for tomorrow

Motor Coordination • poor gross motor and motor planning skills, awkward gait, poor at sports, poor stamina and balance, difficulty sitting upright at desk for long periods • poor bilateral and/or fine motor skills for printing, writing, keyboarding • perfectionist about appearance of writing • difficulty with using appropriate pressure on pencil, keyboard	• adjust requirements/expectations in gym • involve in fitness activities or individual sports/recreation such as swimming, skating, weight training • allow student to print or hand-write as he does best • give physical breaks from seat work • experiment with specialized seat cushions, slanted writing surface, different pencil grips, or sizes of pen or pencil • adjust quantity/quality of written work • provide extra time for tests • teach keyboard skills or hunt and peck, and don't allow lack of keyboarding skills to delay use of computer for communication or assignments • ensure the involvement of occupational therapist/physical therapist as necessary

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Area of Difficulty	Strategies
Academic Work • usually average to above-average intelligence but may be significantly limited by elements of AS • may orient to print or numbers at early age, causing others to see him as very bright • expressive language may be better than receptive understanding, so others may overestimate his ability • may take more time to process verbal information than he is given, but tries to look competent and to avoid drawing attention to himself • excellent rote memory for factual information and good word recognition/vocabulary skills mask problems with comprehension in reading, and problem-solving in math • may retain and store information without sorting or filing, affecting ability to understand time or sequence, cause/effect, means/end, or to access information quickly	• do not assume that the student has understood simply because he can restate the information • be as concrete as possible in presenting new concepts and abstract material • use activity-based learning where possible • use graphic organizers such as semantic maps, webs • break tasks down into smaller steps or present in another way • provide direct instruction as well as modeling • show examples of what is required • use outlines with topics and sub-topics written to help student take notes and organize and categorize information • avoid verbal overload • build on strengths (for example, memory) • do not assume that student has understood what he has read—check for comprehension, supplement instruction, and use visual supports • use visual strategies to help student organize facts, identify categories and relationships, organize thoughts to express himself orally or in writing, and make abstractions such as time or distance more concrete • assess and teach comprehension skills for reading and math word problems
Emotional Vulnerability • may have difficulties coping with the social and emotional demands of school • easily stressed because of inflexibility • prone to anxiety • often has low self-esteem • may have difficulty tolerating making mistakes • may be prone to depression • may have rage reactions and temper outbursts	• provide praise and tell the student what he does right or well • teach the student to ask for help • teach techniques for coping with difficult situations and for dealing with stress, such as relaxation strategies • use rehearsal strategies to prepare for difficult situations • provide experiences in which the student can make choices • explain ASD or AS to student • help the student to understand his behaviours and the reactions of others • educate other students about ASD or AS

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Area of Difficulty	Strategies
Emotional Vulnerability (continued)	• use peer supports such as buddy system and peer support network For more information, see Anger Management, Chapter 5, pages 42 to 46.

Sensory Sensitivities
• most common sensitivities involve sound and touch, but may also include taste, light intensity, colours, and aromas
• types of noise that may be perceived as extremely intense are
  • sudden, unexpected noises such as a telephone ringing or fire alarm
  • high-pitched continuous noise
  • confusing, complex, or multiple sounds, such as in shopping centres
• may resist going to settings where he expects loud noises or other unpleasant sensory input such as smells
• exhaustion from trying to cope with sensory overload may lead to irritability, behavioural outbursts, reduced coping ability later in day
	• be aware that normal levels of auditory and visual input can be perceived by the student as too much or too little
	• keep the level of stimulation within the student's ability to cope
	• avoid sounds that are distressing, when possible
	• use music to camouflage certain sounds
	• minimize background noise
	• use ear plugs if noise or reaction is very extreme
	• teach and model relaxation strategies and use of diversions to reduce anxiety
	• provide opportunities and space for quiet time
	• arrange for independent work space that is free of sensory stimuli that bother the student
	For more information, see Chapter 5, pages 27 to 36.

For online resources for Asperger's Syndrome, see

- OASIS (online Asperger Syndrome Information and Support) <www.udel.edu/bkirby/asperger>
- More Advanced Autistic Persons Services <www.maapservices.org>
- Tony Attwood's website <www.tonyattwood.com.au>

APPENDIX C:
BEHAVIOURAL SUPPORT FOR STUDENTS WITH ASD

How to Use this Appendix

Behavioural Support for Students with ASD provides the team with a process for helping students with ASD learn to manage their behaviour. It is divided into two sections. The first section describes positive behavioural support, challenging behaviour and the student with ASD, and the Functional Behavioural Assessment process. The second section provides a summary of common challenging behaviours, potential causes, and instructional strategies geared to specific behaviours.

Challenging Behaviour and the Student with ASD

Challenging behaviour may take many different forms and have a variety of impacts on the student and those around him, depending on where, when, and with whom it occurs. A challenging behaviour

- can pose a risk to the safety of the student or to others
- has a negative impact on learning or social opportunities
- interferes with the student's potential to develop new skills or enjoy new opportunities
- disrupts the life of the family and school community

Challenging behaviour may have many causes. When attempting to understand the behaviour of a student with ASD, the team should always begin with the primary characteristics and associated features of the disorder. Impairments in communication and social skill development, abnormal responses to sensory input, anxiety, short attention span, cognitive disability, etc. can lead to challenging behaviour. These factors can also make it difficult for a student with ASD to tell others what is wrong.

> "To change your child's behaviour you need to be able to make sense of that behaviour, and making sense of your child's behaviour means making sense of his autism."
>
> —Philip Whitaker, *Challenging Behaviour and Autism*, 2001.

When trying to make sense of a student with ASD's behaviour, a good place to start is with this question: "If this behaviour could talk, what would it say?" For example, when a student with ASD refuses to take turns with playground equipment, is the behaviour saying: "I don't know how to take turns," or "I don't know how to play other games at recess, so this is all I want to do." The answer to the question of what the behaviour is trying to say often leads back to the difficulties and challenges the student faces from ASD.

Positive Behavioural Support

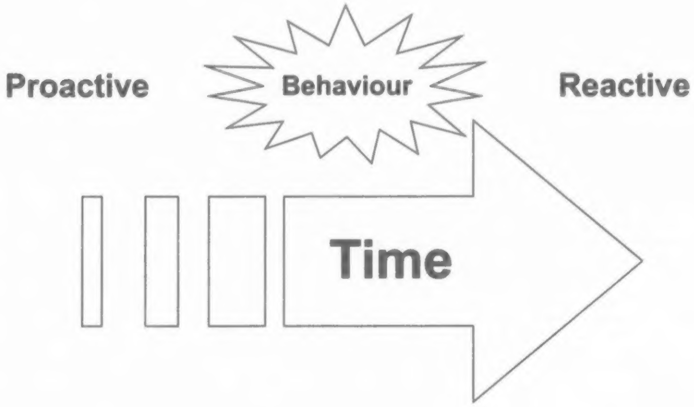
Students with ASD need support that is geared to ASD.

Positive behaviour support attempts to build the student's capacity to manage his own behaviour. Some examples of this include

- teaching the student with ASD new skills to replace challenging behaviours or reduce their frequency (for example, teaching the student who won't take turns with playground equipment at recess to play tag)
- providing supports that allow the student to function more independently (for example, a visual time-table that allows the student to anticipate events during the school day and prepare for them)
- removing or reducing environmental distracters (for example, moving a student who is easily distracted by hallway noise away from the classroom door)

Strategies for supporting students with challenging behaviour fall into two broad categories: proactive and reactive.

Proactive strategies focus on addressing factors that precede (and may cause) a challenging behaviour. Reactive strategies focus on what happens after a behaviour occurs. The goal of proactive and reactive strategies is to reduce or eliminate the challenging behaviour. The selection of proactive or reactive strategies (or a combination) depends on the team's assessment of the student.



Functional Behavioural Assessment

A Functional Behavioural Assessment (FBA) identifies the function (or functions) that a specific behaviour serves for the student with ASD. It is based on the belief that behaviour serves some purpose. This provides the information required for a useful behaviour plan.

To conduct an FBA and develop an appropriate behaviour plan, the team needs to follow these steps

1. describe the behaviour
2. identify the function(s) of the behaviour and contributing factors
3. develop a plan
4. review and evaluate the plan

Step One: Describe the Behaviour

The team begins by describing the behaviour and deciding whether intervention is necessary.

When describing the student's behaviour, it is important to

- include the frequency and duration of the behaviour. For example, if describing a tantrum, say how many times a day/week it occurs and for how long
- be specific (see table 1.1 below)
- clearly identify where, when, and with whom the behaviour occurs

Table 1.1: Behaviour Description

Vague	Better
The student hurts himself.	The student bites his hand/strikes his forehead with a closed fist when told by an adult in the classroom that a preferred activity is about to end.
The student refuses to do what he is asked to do.	The student pushes materials off his desk in the classroom when told by the teacher it is time to do math.

After the behaviour has been described, the team needs to decide whether it requires intervention. Not all behaviour requires an elaborate response from the team. Some behaviours may be in response to a specific situation (for example, an earache) and end when the situation is resolved.

In determining if a behaviour requires intervention, it is helpful to consider whether it

- is potentially harmful to the student or others
- interferes with the student's learning or the learning of others
- results in negative reactions and/or avoidance by others
- limits opportunities for experiences in the classroom, school, or community
- is well-established or likely to fade without direct intervention (see example in preceding paragraph)

Note: In situations where a student is producing more than one challenging behaviour, it is usually more effective to pick one behaviour (using the five points above as a guide) and deal with it rather than taking on a large number of challenging behaviours at once. In many cases, working on one challenging behaviour reduces the frequency of other behaviours. For example, if a student *hits*, *screams*, and *runs* to escape noise in a crowded school hallway, all three behaviours may decrease if strategies to help the student manage noise are put in place. All three behaviours share the same *function* for the student: escape. As a result, when the student's need to escape hallway noise is removed, all three behaviours decrease.

Step Two: Identify the Function(s) of the Behaviour and Contributing Factors

In the example above, understanding the function (a need to escape hallway noise) of the student's challenging behaviour allowed effective strategies (aimed at helping the student manage hallway noise) to be put into place. The result was the reduction of three different challenging behaviours that met the student's need for quiet in the hallway.

The function of challenging behaviour is not always obvious. It is usually necessary to collect (or review) information about

- the student
- events before the behaviour occurs (where, when, and with whom it occurs)
- the behaviour itself
- events after the behaviour occurs (consequences, responses of others, etc.)

The student's communication and social interaction skills must always be considered as contributing factors. It is also important to consider potential medical/dental issues, including

- the student's general level of health/wellness
- side effects of medication (or impact of not taking medication as prescribed)
- the quality of sleep the student is getting
- nutrition, seizure activity, dental health, and anything else that might impact on the student's behaviour

When this is completed, the team can then proceed with a thorough investigation into the behaviour. Table 1.2 provides a summary of factors that should be considered.

Table 1.2: Factors Influencing Behaviour

Student-Specific Factors

- communication and social skills
- attention span
- cognitive skills
- problem-solving skills

External Factors

- nature of instruction (for example, appropriate language level, clear expectations, availability of choice, match between task difficulty and cognitive skills)
- structure, routine, and predictability in schedule and activities
- impact of others; impact of setting (for example, does behaviour occur with one person but not another; in one setting but not another?)
- impact of noise, lighting, or movement

Function(s) of the Behaviour

- escaping task, person, or setting
- attention-seeking
- getting something tangible (for example, favourable object or activity)
- sensory (for example, self-stimulatory)
- if the student is non-speaking or minimally verbal, ask yourself: "If this behaviour could talk, what would it say?"

Trigger (Potential Causes) of the Behaviour

- events or situations immediately prior to the behaviour (for example, a particular task, person, or locale; time of day; requests or refusals; and so on)
- events or situations occurring well before the behaviour that impact on the behaviour (for example, a poor night's sleep that leads to irritability)

Consequences that Impact the Frequency of the Behaviour

- events following the behaviour that increase or decrease its frequency (for example, attention, time out, praise, something tangible or edible)

Note: Depending on circumstances and the individual student, identical consequences may have different effects on the frequency of behaviour. For example, a student who values social contact may find time out punishing (which usually decreases the frequency of the challenging behaviour), whereas a student who values quiet and solitude may find time out rewarding (which usually increases the frequency of the challenging behaviour).

Data can be obtained from

- the student's records, including the student profile
- interviews with people who know the student, such as parents, educators, or educational assistants
- direct observation (video recording is a valuable tool for collecting information)

From the data collected, the team should attempt to identify what is triggering the behaviour, what is maintaining it, and what purpose it serves for the student.

Step Three: Develop a Plan

When the team is able to describe the behaviour, what triggers it, and what purpose it serves for the student, a plan can be developed to help the student manage his behaviour. This plan should include:

- a description of the challenging behaviour
- the possible reasons for it
- a desired alternative behaviour
- proactive and reactive strategies/student enablers
- a review and evaluation of the plan's effectiveness

An example for step three is provided.

BEHAVIOUR SUPPORT PLANNING WORKSHEET

Student's Name Jason **Date** October

Student is doing _____ or not doing _____. (how, when, where, how often, with whom)

The student pushes materials off his desk in the classroom when told by the teacher it is time to do math.

Possible causes:

The student may

- want to complete what he was doing before starting math
- not understand what is required and be frustrated
- need a visual cue to switch from one activity to another
- be bored with the activity
- be able to do the work, but there is too much to complete in the time allotted

State alternative student will do (how, when, where, with whom, with what prompts).

The student begins his math work at his classroom desk with minimal disruption following the presentation of a visual prompt by the teacher.

BEHAVIOUR SUPPORT PLANNING WORKSHEET

Proactive Approaches	**Reactive Approaches**
• Give the student time to complete what he is doing prior to the next activity. • Provide the student with appropriate visual prompts to cue him about the time remaining to complete an activity. • Ensure that the student is cognitively able to do the activity. • Vary the materials to generate interest. • Allow sufficient time to do the task. • Teach the student how to self-monitor the time required to do the task.	• Ignore the student when he pushes the materials from his desk. • Redirect the student. • Use enablers such as a visual schedule showing that it is "math time."
Results	**Results**

This planning worksheet is available in Appendix F: Forms.

An Alternative Behaviour or Skill

It may be possible to identify an alternative (and more appropriate) behaviour that serves the same function for the student as the challenging behaviour. For example, a student who screams and throws his shoes because he cannot tie his laces may be taught how to ask for help in a more conventional way.

An alternative behaviour usually involves a more effective and appropriate way to

- communicate
- interact socially
- manage anger
- perform everyday tasks and activities
- demonstrate self-control

Alternative behaviours may not be in the student's repertoire. They may have to be taught directly and reinforced consistently. It is important to select alternative behaviours that a student will be reasonably able to achieve and to break them down into small, manageable pieces for instruction. For example, alternative behaviours that are well beyond a student's current level of cognitive or motor development will not be successful because they cannot be learned.

Strategies

Strategies are how the team helps the student to learn to manage his own behaviour. The goal of proactive and reactive strategies is the same: to cause a reduction in the student's challenging behaviour.

Proactive strategies focus on events and circumstances before the behaviour occurs. Teaching an alternative behaviour and using student enablers are examples of proactive strategies. Reactive strategies focus on what happens after a behaviour occurs. Reactive strategies, for example, might include simply ignoring the behaviour (if possible), redirecting the student, or reinforcing a desirable behaviour immediately after it occurs.

The Trouble-Shooting Guide in this appendix contains a range of strategies linked to specific behaviours. The instructional strategies in Chapters 4 and 5 should also be considered when developing the plan. An appropriate IEP is a powerful way to prevent or reduce challenging behaviour.

Student Enablers

In some cases, it may be appropriate to provide enablers, either by themselves or along with the alternative behaviour. An enabler is an external support that allows the student to function with greater independence. Examples of student enablers include

- a picture schedule
- ear plugs
- changes in physical arrangements, such as seating
- a chair to sit in at circle time instead of on the floor

There is a wide range of potential student enablers, depending on the student's profile and the circumstances of the challenging behaviour.

Step Four: Review and Evaluate the Plan

It is important to set a date (usually within two weeks of the plan's initial implementation) to review the effectiveness of the plan in reducing the challenging behaviour. If it is necessary to make changes, it is better to make them before too much time is lost.

The team should consider whether

- the challenging behaviour is decreasing
- strategies are implemented consistently
- reinforcers are still effective
- different strategies need consideration

Trouble-Shooting Guide

How to Use the Trouble-Shooting Guide

The Trouble-Shooting Guide is intended to complement the process outlined in the first section of Appendix C by providing possible reasons and strategies related to specific student actions and challenging behaviours. An index on the following pages allows the team to search for information about a specific student action.

Please note:

- If a specific student action is not listed, review the index for similar actions. Many behaviours have similar underlying functions for the student, and the strategies for one behaviour may be appropriate for another.
- For reasons of length, the Trouble-Shooting Guide does not address sensory issues. Please see pages 27 to 49 in Chapter 5 for strategies concerning abnormal responses to sensory stimuli.

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Social Interaction: Won't play with others

Action	*Possible Reasons*	*Strategies*
• isolates self within classroom (for example, takes toys or materials to corner and turns away from others) or • seems to watch others playing but doesn't join in; resists adult intervention	• oriented more to objects than people due to – desire for repetitive sensory experience – limited communication skills – lack of social experience or • little or no drive to be involved with people or • lacks communication or initiation skills to join other(s) in play or shared activities (especially common with more able students who have always preferred computers or video games to peers)	Observe materials/activities student chooses independently. In low-distraction setting, teach student to use and to enjoy activities/materials in parallel with an adult and to use material in different ways (for example, use different sizes of balls in different settings and in different ways). For older/more able students, teach age-appropriate activities such as board or card games, trading cards, collecting sports statistics or scrapbooking, etc. Introduce turn-taking with one adult. Introduce one student at parallel play. Introduce one student at interactive play. Take familiar activity and familiar playmate into classroom setting. **Note:** Expect that this may take a long time and many trials.
• keeps trying to join groups but is intrusive verbally or physically; keeps repeating his approach, even if unsuccessful	• doesn't process and can't imitate subtle and often changing rules for this kind of interaction • has only one strategy; can't generate alternates	If possible, give student practice in small group setting. Try videotaping other children joining in successfully and/or call his attention to this behaviour when it happens in the classroom. If student is verbal, let him practise a script for what to say and do to join an existing group. Train peers to respond supportively to student's efforts. Praise and reward everyone for group successes. Provide practice in trying different approaches to solving problems.

Social Interaction: Difficulty with recess

Action	*Possible Reasons*	*Strategies*
• isolates self on playground by walking alone, or standing by the door, or wanting to talk to an adult	• does not know how to do playground activities or how to use equipment or • is overwhelmed by noise and movement or • needs "down time" away from demands for social interaction, listening, and task demands	Teach him to do activities and to use equipment one-to-one on the playground at times other than recess, and gradually introduce a few other familiar students. Try finding a more quiet area of the playground for the student and a few peers to play, rather than needing to be in the middle of many other students. Consider assigning recess buddies or an older student to play a predetermined and pre-taught activity with student for all or part of recess. See Gray, C. *Taming the Recess Jungle*, 1993. Allow student to choose time to be alone at recess to escape from classroom stress.
• runs from playground in an attempt to go home, or just to leave the grounds	• wants to go home or • any large open space is a trigger for running or • likes to be chased	Provide adult supervision at all times and keep adult between student and access to street. Use visual script for recess expectations with significant rewards for what he is to "do" at recess, and have a valued activity occurring just after recess. Give him experiences with being able to run and be chased in structured game format, again being sure that he cannot reach the street. If someone must chase him, provide no interaction. Return him to the spot from which he ran and walk him through the expected task. Praise and reward.

(continued)

Social Interaction: **Difficulty with recess** (continued)

Action	*Possible Reasons*	*Strategies*
• resists going outside for recess	• dislikes any change of setting or • does not know how to enjoy himself at recess or • overstimulated by setting where others dress for recess; anxious about using stairs, temperature, or air movement outside, and/or noise and movement at recess	See "Transitions" section for a discussion of preparation for transitions. See above for pre-teaching activities to be done at recess. It may be possible to desensitize student to changes in outdoor weather. Coping with the outside may also be so stressful for the student that the time is better spent using indoor recess time to address some other IEP goals. Provide adult support on steps if necessary. Let student leave class early to put on outerwear alone.
• will not take turns with playground equipment such as swings or balls; grabs them, refuses to give them up once he has them	• does not understand turn-taking or • perceives time differently, feels he has "just started" to play or • does not get enough experience with the balls or swings because he needs more exposure to learn to enjoy them	See "Refuses to Take Turns" for a discussion of teaching turn-taking. Pre-teach turn-taking in low-stimulus setting with adults. Set quantitative limits for turns, such as "ten swings, then finished." Have something else which student enjoys as the "next" activity so it is easier for him to leave the first one. Praise and reward success. Give child more exposure to playground equipment at non-recess periods. Ensure that he starts dressing early enough that recess time is not spent getting ready to go out.

Social Interaction: Laughs when others are sad

Action	Possible Reasons	Strategies
• laughs inappropriately when others are hurt or sad or • seems to deliberately provoke or hurt others to see reaction	• finds demonstration of pain or emotions in others overwhelming and/or confusing, reacts from anxiety or distress or • provokes a reaction in a cause-effect way for the satisfaction of being able to predict and control; can't understand that the emotions and perspective of others are different from his own	Depending on student's level of receptive communication and cognitive skills, take every opportunity in casual situations to explain every kind of emotional reaction; give the vocabulary and explain the reasons (for example, "He's crying because he fell and hurt his knee on the gravel. See his face? His eyes are closed tight and his face is scrunched up tight like this (adult model) and he isn't smiling. That's the way someone looks who is sad."). Label student's emotions when shown; use a mirror. For deliberate provocation of others, keep reactions neutral and use rules for "how to talk to other kids."

Social Interaction: Rude

Action	*Possible Reasons*	*Strategies*
• says rude or impolite things to others; shows no sensitivity to feelings of others	• almost certainly does not understand the cues of facial expression and body language which communicate emotional state or • does not understand subtle social rules (for example, speaking in different ways to different people; avoiding certain topics or questions)	Explain situation clearly using words/ graphics/Comic Strip Conversations, etc. Explain to peers why student sometimes says inappropriate things. Practise using role-playing. Call student's attention to the way others handle these situations. Videotape classroom peers or use commercial videos or CDs. Compile lists of sample situations and scripted responses which would be appropriate/inappropriate.
	• has learned by trial and error that using certain kinds of words or expressions gets laughter or attention from classmates, and has few other ways to get response from peers	Explain situation clearly using words/ graphics/Comic Strip Conversations, etc. Teach acceptable ways to get attention from others; have student practise. Engage peers in helping student learn how to act by not responding with the kind of reaction he enjoys when he behaves inappropriately.

Social Interaction: Over-personalizes

Action	*Possible Reasons*	*Strategies*
- over-personalizes, interprets reactions from others when they are tired or upset as personal rejection ("She's mad at me; she is not my friend anymore"); becomes very upset and/or non-compliant and aggressive	- almost certainly does not understand the cues of facial expression and body language which communicate emotional state; inclined to be self-focused, not understanding that others have reactions for reasons that don't involve him	Explain situation clearly using words/ graphics/Comic Strip Conversations, etc. Role-play these situations; give student words to ask how someone is feeling (for example, "You don't look happy. Can I do something to help? Are you mad at me?" "Did I do something wrong?"). Help student learn and practise a verbal script to reassure himself when these situations occur. See books by Duke and Nowicki, and Winner in Suggested Readings.

Social Interaction: Pushes past others

Action	*Possible Reasons*	*Strategies*
- pushes past or steps on others without seeming to know they are there	- so focused on his objective that he really doesn't notice others or - has difficulty with motor-planning or controlling impulsiveness	Stop student when he pushes others whenever possible and call his attention to presence of others. Call his attention to how others move through the room as it happens. Help student to look and plan movement patterns and to use words such as "Excuse me please." If student can make use of visuals, try drawing the plan for/with him. Praise success.

Social Interaction: Corrects behaviour of others; tattles

Action	*Possible Reasons*	*Strategies*
• corrects behaviour of others; tattles	• rule-bound; uses rules to understand how the world works and what he is expected to do; has difficulty understanding "exceptions" and "sometimes" and understanding why the adult is not dealing with the rule violation immediately	Explain situation, social rules, and expectations of others clearly, using words/graphics/Comic Strip Conversations, etc. Role-play in one-to-one or small-group setting. Try reversing roles so that child can see how he reacts when he is constantly corrected. Regarding tattling: teach the rule that you tell an adult about another person if the other person is doing something that might hurt him, or someone else, or might damage something. Practise through role-playing. Teach rule to entire class so that student sees that the rule applies to everyone.

Social Interaction: Interrupts

Action	*Possible Reasons*	*Strategies*
• constantly interrupts others to correct their facts, spelling, grammar	• rule-bound (see above) and draws security from correctness; needs to see the world as black/white	Explain situation clearly using words/graphics/Comic Strip Conversations, etc. Role-play in one-to-one or small-group setting. Try reversing roles so that child can see how he reacts when he is constantly interrupted or corrected. Set concrete limits, such as allowing so many corrections or interruptions per hour, with tickets handed in each time. Let student meet his need to correct errors by doing worksheets which require correction of grammar, punctuation, or spelling. Teach flexibility.

Social Interaction: Obsessed with someone

Action	*Possible Reasons*	*Strategies*
• obsessed with specific person in a positive way (for example, wants to play or talk with him constantly; wants exclusive attention from him) • child may have difficulty focusing on anything else if this person is present	• stuck in the developmental phase common to many children ("This is my mommy" or "He's my friend and you can't play with him.") or • has no positive interaction with any other person; does not know how to connect with others	Help student add to repertoire of activities and peers with whom he is comfortable and has fun, so he can enjoy more than one person. Use a social story to explain rules of friendship and turn-taking. Work outside classroom for some periods of time to help the student get "un-stuck." **Note:** See <www.TheGrayCenter.org> (Ask the Experts) for more ideas.
• obsessed with specific person in a negative way (for example, aggressive on sight; tries to damage person's belongings; says that person and/or person's family is a threat when they are not)	• patterned, repetitive behaviour; sometimes common to persons with ASD	For negative obsession, use visual approaches (print/graphics/photos) to provide positive script regarding the other person. For a time, try to structure student's time to reduce contact with the other person in order to break the old pattern and to establish new ones. **Note:** For negative obsession, ensure that the student does not have an opportunity to hurt the other person or damage his belongings. Reassure the other person that he has done nothing wrong.

Social Interaction: Over- or under-reacts to events

Action	*Possible Reasons*	*Strategies*
• Over- or under-reacts to events, especially those with an emotional component; can't match amount and kind of response to situation	• chronically anxious because of other stressors (environmental, social, family, etc.); unable to handle more or • very sensitive to emotional expression; reads any increase in others' emotion, even happiness or pleasure, as overload and shuts down or • has limited understanding of the "why" of social rules and expectations, and others' motivation and actions	Prompt student on the spot for appropriate words or actions. In one-to-one or small-group sessions, use social stories, commercial videos, videos of student and peers, or other techniques to discuss and demonstrate what kind of response and how much would be expected in various situations. Role-play in safe environments. Transfer to real-life situations, even if you need to manufacture them. Always debrief with student about what he did right and why (for example, "that worked well because…") so he doesn't get stuck on idea of personal failure, or that he is single-handedly responsible for whatever happens. Increase amount of time in student's program spent on social skills/social communication/social problem-solving.

Social Interaction: Over-reacts to birthday parties

Action	*Possible Reasons*	*Strategies*
• upset when another student has a birthday party in class (insists on blowing out candles, wanting presents, etc.)	• has no understanding of what the celebration means, or of the passage of time and that everyone has one birthday per year, that he will have another birthday party at some future time, etc.	Use social stories, role-playing, and visual and verbal explanation as appropriate to explain the rituals, the calendar, etc. Role-play appropriate behaviours in one-to-one setting, perhaps with drawings or stuffed animals taking different roles; then add one or two other students to the role-play. Practise ahead of time, so he knows what will happen, what he is to do or say, etc.

Social Interaction: Refuses to take turns

Action	*Possible Reasons*	*Strategies*
• refuses to take turns with peers, even in non-competitive activities	• has not learned pivotal social interaction skill of turn-taking	Explain why turn-taking is expected and required. Practise in one-to-one setting with adult, beginning with turns of a few seconds, in a time-limited practice period, followed by a preferred activity or reinforcer. Fast-paced gross-motor activities may be an easier tool to teach turn-taking than sedentary ones. Gradually extend. Teach pro-social skills and verbal scripts such as "Five ways to praise." Post graphic or written reminders of what he is to say and do. Practise and reward.

Social Interaction: Wants to win

Action	*Possible Reasons*	*Strategies*
• refuses to play any game unless guaranteed he can win or • gets extremely upset unless assured that his work is "the best"	• is rigid and rule-bound or • is anxious about social status; has low self-esteem or • sees life as win/lose, or success/failure with no middle ground	Explain that people play games to enjoy the interaction, as well as to win. Teach flexibility and tolerance for meeting benchmark goals rather than always aiming at perfection, or comparing himself with other people. Look for ways to boost self-esteem.

Social Interaction: Rejects affection or seeks it inappropriately

Action	*Possible Reasons*	*Strategies*
• reacts with anger or distress if anyone touches him even in passing, and rejects other students' desire to hug him	• hyper-sensitive to touch, especially when he can't see it coming; overwhelmed by sensory and emotional aspects of affection	Discuss with parents and consult with occupational therapist regarding desensitization to touch and affection. Teach him to accept and give "high-fives" or secret hand signs or some kind of verbal way to show connection. Explain to peers that he doesn't like hugs but can learn to like "high-fives" or "low-fives." Prevent peers from teasing/bullying. Teach acceptable ways to respond to teasing/bullying.
• seeks affection inappropriately with familiar adults or peers (full body hugs, burrowing face into another's body, constant touching)	• may be going through an affectionate stage that fits his developmental but not his chronological age; just as he has learned to enjoy the experience, people don't enjoy it with him	Use social stories or resources such as the Circles Program (Champagne, 1993) to help child learn which kinds of affection are appropriate with different people in his world. Teach him physical contact that is appropriate and other ways to enjoy social interaction with adults and peers. Provide opportunities for deep pressure and appropriate affection to meet sensory and social needs.
• indiscriminate with strangers, will talk to, accompany, and/or be affectionate to anyone	• may see people as interchangeable sources of treats, or interesting stimulation or attention	See above. Teach firm rules and practise them, perhaps using stand-in "strangers." Be prepared to provide ongoing supervision, as child may never be "safe" with strangers.

Social Interaction: Inappropriate sexual talk/behaviour

Action	*Possible Reasons*	*Strategies*
• talks about body parts (penis, vagina, etc.) in inappropriate settings or • tries to look under other people's clothing	• may be repeating part of what he has been taught at home or has heard elsewhere, as a means to get more information or • may just be trying to start a conversation or • may be signaling confusion about puberty, or changes in his own and others' bodies and changes in peer behaviour, and a need for information or reassurance	Acknowledge what he has said in a calm, non-committal way and redirect him to another activity or topic. After collaboration with family, use social stories to give him some simple rules to distinguish "what we talk about to family, doctor, or nurse" and "what we talk about to friends" and where and when these discussions should take place. Provide instruction about sexuality, personal health, and hygiene at his level of understanding. Remember that student's physical maturity may be much more advanced than his interests, his cognitive skills, or his emotional maturity.
	• may enjoy predictable or animated responses to what he says or does, and has learned from experience or observation that use of terms related to body parts or sexuality often fluster adults and get laughter and attention from peers	Be calm and neutral in tone of voice and facial expression. Plan a common strategy that all school staff use, to avoid providing social reinforcement. When possible, explain to peers that the student often says things without understanding that they are not "cool" or "grown-up," and that everyone has a responsibility to help him learn how to act by not laughing or paying attention to inappropriate remarks.

Social Interaction: Inappropriate sexual behaviour

Action	*Possible Reasons*	*Strategies*
• masturbates or fondles self in school	• enjoys the feeling; uses it for comfort when stressed, bored, or doesn't know what to do next, or time is unstructured	Collaborate with parents to agree on response and strategies. Observe to identify settings in which student uses behaviour and make changes in schedule or activities as required to reduce stress, increase structure and predictability, and introduce more enjoyable activities. Consider having student wear overalls or pants with snug waistbands, and reinforce other activities which need use of both hands. As part of training regarding sexuality and hygiene, teach where and when masturbation can be done.
	• enjoys predictable, animated response from others	Be calm and neutral in tone of voice and facial expression. Plan a common strategy to avoid providing social reinforcement that all school staff use. When possible, explain to peers that the student often does things without understanding that they are not "cool" or "grown-up," and that everyone has a responsibility to help him learn how to act by not laughing or paying attention to inappropriate actions.

Communication (Receptive): Doesn't follow instructions

Action	*Possible Reasons*	*Strategies*
• does not follow instructions or seem to understand what he hears	• does not understand spoken words	Always use visuals/gestures/demonstrations.
	• does not attach meaning to speech, hearing it as just more environmental noise	Teach the meaning of specific important words (for example, food, toys he likes) one word at a time, in a non-distracting environment.
	• does not understand specific words	Pre-teach vocabulary and ensure comprehension, not just ability to repeat. Use hands-on experiential approaches to teach meaning.
	• speech rate is too fast for student to process	Slow down (for example, speak; wait 10 seconds, repeat words again; wait 10 seconds). Add visuals if necessary.
	• cannot screen distracters	Give directions or introduce new material in low-distraction area. Teach student strategies to focus and screen (for example, using hands as blinders to block out visual stimulation; use cotton balls or earplugs/earphones to buffer noises; reduce distracters as possible).

(continued)

Communication (Receptive): Doesn't follow instructions (continued)

Action	*Possible Reasons*	*Strategies*
• does not follow instructions or seem to understand what he hears	• does not start listening soon enough because he is concentrating on something else	Teach visual or verbal alerting signal for "listen, pay attention" (begin in one-to-one setting, then transfer to classroom environment; use signal consistently). Use verbal "highlighting" (for example, "The most important thing to remember is…").
	• understands one word and stops listening; jumps to conclusion (for example, hears "wave a flag" instead of "wave a gun" because he pairs the words "wave" and "flag")	Use visual/verbal/physical cues to explain; have student show comprehension by means other than repeating. Understand this as a communication of anxiety and need for predictability.
	• understands literal meaning of words but does not understand that vocal inflection, emphasis, sarcasm, etc., can alter meaning	Teach directly. Try audio-taping and videotaping peers and let student practise in many settings. Do as a classroom activity if appropriate. Acknowledge that it is very confusing, and give him words to use to ask for clarification.

(continued)

Communication (Receptive): **Doesn't follow instructions** (continued)

Action	*Possible Reasons*	*Strategies*
• does not follow instructions or seem to understand what he hears	• hears core words but not grammatical markers which give meaning or • sentence is too complex or too long	Break messages into short, simple sentences; use simple construction. For example: Instead of: "Before you go out, check your papers for your names and put them on my desk, and don't forget we go to the gym right after recess." Say: "First, look at your paper. Be sure your name is on it. Then put your paper on my desk. Then go outside." Sensitize all adults to this problem; expect it to occur frequently.
	• interprets words literally rather than understanding figurative meaning (for example, "Pick up your feet"; "Give me a hand"; "Push yourself on the swing"); becomes frustrated because he can't rely on one word to have one meaning	Use experiential/visual/tactile ways of teaching that one word can have different meanings in different settings. Do group lessons on homophones/ homonyms/multiple meanings; keep running chart of examples in class. Sensitize all adults to this problem; expect it to occur frequently.
	• becomes so distracted or distressed when the speaker makes errors in grammar, fact, or spelling that he misses the rest of what is said	In small group setting, help him to practise making a mark on a paper to note the error and waiting to do the correction. Start with one or two minutes and expand. Try a social story about "My job is to remember what the teacher says."

(continued)

Communication (Receptive): **Doesn't follow instructions** (continued)

Action	*Possible Reasons*	*Strategies*
• often doesn't follow instructions or seem to understand what he hears, even when he can repeat the message	• may "hear what he wants to hear" because the real meaning is unpleasant and/or requires him to change his expectations and/or handle ambiguity (for example, two different people having the same name, computer class being re-scheduled) or • is both very anxious about change and facile with language; is able to multi-task, repeating what he knows you said and want to hear him say, while holding a more comfortable understanding in his own mind **Note:** Expect this problem to occur frequently.	Always use as many channels as possible to give student information (for example, line drawings, demonstration, spoken words, print). Have student communicate understanding to you in many ways other than repeating, such as paraphrasing, demonstrating, acting out, or drawing. Address this behaviour directly with the student. Acknowledge that it happens many times daily and may be causing him to feel more frustrated and anxious toward the end of the school day. Try a social story; practise with another person using speech bubbles to remind him to hear and remember what was really said.
	• only processes "important" words (for example, "computer" and "today") and misses the meaning of the entire message (for example, "There is no computer class today") **Note:** This may help to explain "meltdowns for no reason."	Have student communicate understanding in ways other than repeating (for example, paraphrasing, demonstrating, acting out, drawing).

Communication (Receptive): **Doesn't follow age-appropriate instructions**

Action	*Possible Reasons*	*Strategies*
• does not seem to understand age-appropriate instructions (for example, "play nicely"; "act like a good friend"; "behave like a Grade 1 boy does in the library")	• language is too vague and student does not know what he is expected to do or say	Use specific, clear instructions with a few words and/or visuals. Break into steps, such as: 1. Walk in line with hands in pockets. 2. Follow child ahead of you to carpet. 3. Sit on your carpet square with quiet hands and look at the librarian. Use modeling and role-playing to teach him a few behaviours which show being "a good friend" or "playing nicely."

Communication (Receptive): **Doesn't follow instructions unless repeated**

Action	*Possible Reasons*	*Strategies*
• does not follow an instruction until it has been repeated multiple times	• may be waiting for enough information to know how to respond (for example, does not understand words alone and may have learned that as people repeat instructions they tend to raise their voice tone, use fewer words, slow down speech, and use gestures)	Be sure to get the student's attention when giving instructions; give instructions slowly using a short phrase; add gestures. Allow student 10 seconds to process and respond before repeating. Try to match the number of words used to the student's mean length of utterance. Note that a student may echo a multi-word phrase, which he has memorized as one unit, and he may only respond to one- or two-word instructions. Sensitize others to the need to do this.

Communication (Receptive): Doesn't follow instructions promptly

Action	*Possible Reasons*	*Strategies*
• able to respond to a question or follow instruction after 60-second delay; unable to do it more promptly	• has processing lag for understanding and making a verbal or motor response **Note:** As tasks or vocabulary become more familiar and practised, the processing lag may decrease. Observe if lag is different for making a verbal or a motor response.	Be sure to get the student's attention before giving instructions; give instructions slowly using a short phrase; add gestures. Pace activities and instructions to accommodate student.

Communication (Receptive): Doesn't respond when called

Action	*Possible Reasons*	*Strategies*
• does not look or come when name is called	• is not able to isolate the sound from background noise or • does not know he is expected to look or to come or • doesn't see the point of looking at people	Teach student to connect his name to himself and to look at speaker; begin in one-to-one setting; use physical prompts as necessary; reinforce student when successful. If required, get student's attention visually and use a gesture; teach student (as above) that it means, "come." Sensitize others to the need to do this. If appropriate, use a social story and role-playing to explain and demonstrate expectations. Have other students demonstrate.

Communication (Receptive): Runs away when name called

Action	*Possible Reasons*	*Strategies*
• runs away when name is called	• habit or • has learned the behaviour to avoid interaction, task demands, or unpleasant situations	Retrieve student with no interaction and return to spot from which he ran. Teach and reinforce responding to his name.
	• enjoys being chased	Teach as above, but build in times for "chase me" games in other settings during day. Interpret this behaviour as a need for more physically active social interaction games.

Communication (Receptive): Unpredictable reaction to praise

Action	*Possible Reasons*	*Strategies*
• likes being praised sometimes but at other times has tantrums and stops doing the activity	• needs to concentrate on steps of task and is derailed if required to process communication and/or social interaction at the same time, even if it is praise or • may be able to process praise or other social/verbal interaction once the task is automatic, but not when it is new	Sensitize others to wait until student finishes a task before praising him or giving further instructions. If student is verbal or can use visuals to communicate, teach him to communicate "Please wait. I can't listen and do this at the same time." For new tasks, let student practise in low-distraction setting.

Communication (Receptive): Doesn't understand visual schedule

Action	*Possible Reasons*	*Strategies*
• does not seem to understand visual schedule	• may not attach meaning to visual symbols because they are too abstract or • hasn't had enough practice with it or • is shown too many symbols at once and can't focus on just one	Begin symbol use at a level the student understands; symbol levels from concrete to abstract are • concrete objects (for example, paintbrush for art) • colour photographs of activity (for example, crafts) or location (for example, gym), with, or without student in the picture, as needed • black and white line drawings • print Use repeated and multi-sensory exposures to help student understand symbol meaning. Use schedule consistently, before and after every change of activity. Involve student in setting it up and using it. Have morning activities on one side and afternoon on the other to limit the number of pictures, or show him just two at a time if he is distracted by many pictures on a schedule. Take the schedule when you change rooms.

Communication (Non-verbal): Doesn't understand body language

Action	*Possible Reasons*	*Strategies*
• does not seem to understand facial expressions and/or everyday gestures and/or body language (for example, teacher "warning look"; saying name in a "warning" tone)	• has not been taught to connect meaning to facial expressions/ gestures/body language/tone of voice, can't learn incidentally through exposure and experience	Use direct instruction to teach student to interpret and to use facial expressions/gestures/body language/vocal inflections, initially in one-to-one or group settings; use visuals, videos, role-playing, Comic Strip Conversations. Provide frequent practice.
	• is accustomed to paying more attention to auditory information or to imitating others or • has difficulty isolating non-verbal communication from other visual distractions	Try practice sessions in which an adult cues student to attend to visual or other kinds of input, and then fades cues.
	• is uncomfortable looking directly at people's faces or bodies because there is too much information to process or emotions seem too intense	Respect student's level of difficulty and acknowledge it as appropriate. Teach him to practise observation and interpretation skills in safe situations for short periods. Teach student a script to ask people what a gesture or facial expression means.
	• does not understand that people give each other messages with eye contact, facial expression, and other non-verbal communication	Use cognitive explanations and/or social stories to explain that people communicate with each other in this way. See Suggested Readings for books by Winner that discuss goals and activities related to perspective-taking and social communication, and books by Duke and Nowicki for activities to teach non-verbal communication.

Communication (Non-verbal): Inappropriate eye contact

Action	*Possible Reasons*	*Strategies*
• avoids eye contact with others	• finds emotional component or complexity of changes of expression overwhelming or • unable to look at another person's eyes and/or face and simultaneously interpret what he is seeing and/or hearing	Help student increase tolerance for eye contact. Respect student's level of difficulty and acknowledge it to him as appropriate. Sensitize others to student's difficulty. Student may need to begin by looking at listener's face while speaking while that person looks away.
	• does not understand that eye contact is expected; does not see the point of it	Use cognitive explanations, social stories, videotaping, and/or role-playing to explain importance of eye contact, even if fleeting. See Suggested Readings for books by Winner.
• stares intently into the eyes when he talks to or listens to someone; won't look away or blink	• may have over-interpreted instructions to "look at people when they talk to you" or • may not have been taught how to make and shift eye contact	Use direct instruction. Have other students demonstrate. Use mirrors or videotapes to practise. Teach a rule with a time limit such as "Look, count to three in your head, look down, count to three, look up." Practise.

Communication (Non-verbal): **Stands too close**

Action	*Possible Reasons*	*Strategies*
• stands too close to people when he talks; keeps stepping forward when the other person backs up	• doesn't understand expectation for social distance and/or the other person's actions or • is attracted to something about the other person, such as hair or scent, and wants to be close	Teach rule using social stories, peer modeling, role-playing, etc. Have peers model appropriate distance. Try teaching visual cues such as "Stand so that you can reach forward and put your hand on the other person's shoulder." Practise.

Communication (Expressive): **Uses behaviour rather than words**

Action	*Possible Reasons*	*Strategies*
• often uses behaviour to communicate (for example, bolting, tantrumming, verbal perseverations) even though he has good expressive skills in many situations	• acts before he is able to access verbal skills, especially when under stress or in a hurry or • needs prompts to use verbal strategies	Develop a behavioural dictionary of the meanings for behaviours which recur. Explain other people's perspectives to student and their inability to know his feelings or needs without a verbal explanation. Use social stories, role-playing, etc. Prompt "on-the spot" as possible so student gets positive practise and instant success. Try role-playing, using common problem situations and written scripts; teach him catchphrases to self-prompt.

Communication (Expressive): Echolalia

Action	*Possible Reasons*	*Strategies*
• immediately repeats or echoes questions, statements, or instructions	• repetition gives him more time to process and understand	Pause after a few words, wait 10 seconds to give student a chance to respond before repeating.
	• is trying to take a conversational turn or indicate he has heard message	Teach him some alternate strategies to stay in the conversation.
	• knows some response is expected but can't find words, or doesn't know the answer to a question and doesn't know how to say "I don't know" or "I don't understand what you mean"	Allow longer processing time. Give verbal or visual cues for expected words, such as cue cards or line drawings of listener and speaker roles. Teach him scripts to use when he doesn't understand. Use closed rather than "wh-" questions and gradually introduce responses to "wh-" questions, such as "For lunch today Michael (or you) had…?" Use visual cues to teach concepts. Provide much practice in naturalistic situations.
	• repeats a phrase using a pronoun (for example, "My name is…" because he can't change pronouns and re-arrange words to say "What's your name?")	Model appropriate interactions, such as by saying "Your name is Thomas. My name is Jack." while pointing to the student and then yourself. Help him to practise.

(continued)

Communication (Expressive): Echolalia (continued)

Action	*Possible Reasons*	*Strategies*
• repeats or echoes words or sentences from other people, videos, books, or TV	• repetition is comfortable or • is filling in a gap in activities	Ignore when not disruptive. Observe to see if student is communicating stress, boredom, confusion, etc., by an increase in echolalia.
	• is trying to initiate conversation or make a comment by using a memorized chunk of words that he associates with the situation	Observe to try to understand the association and work it into the conversation, explaining the thought process to student as appropriate. If necessary, correct false assumptions or misunderstandings. Give student appropriate words for the situation and let him practise immediately.
• can repeat long sentences from video, TV, or conversations, but only uses one- or two-word phrases to initiate or answer	• repetition is easier than word-finding and putting thoughts into spoken words	Use strategies to expand use of phrases and sentences. Sensitize everyone to this difficulty.

Communication (Expressive): Common difficulties

Action	*Possible Reasons*	*Strategies*
• uses third person to talk about himself rather than saying "I"	• has difficulties with pronouns (common for students with ASD)	When student is ready to begin working on pronouns, use direct instruction, role-playing, audio- and videotaping, and other visual cues. It may be easier to start with impersonal pronouns (he, she) rather than personal (I, you).
• speaks too quickly/too slowly/too softly/too loudly or with unusual inflections and emphasis	• these speech characteristics are common for students with ASD	Use audio- and videotaping and role-playing, and practise in small groups to sensitize student to how he sounds and to determine how much can be controlled or changed. Sensitize others, especially peers, to this difficulty to reduce the chance of teasing or bullying.
• can speak in sentences when he initiates but does not respond to questions	• finds initiating easier than responding because he does not have to process a communication first	Accept shorter communication. Use closed questions which allow the student to fill in a missing word rather than needing to rearrange words. Teach student strategies for word-finding problems. Practise response patterns to various "wh-" questions. Ensure that receptive (spoken or visual) vocabulary continues to grow.

Following School Routines: Resists entering school

Action	*Possible Reasons*	*Strategies*
• resists leaving school bus or entering school	• is overwhelmed by sensory aspects, movement of other children on bus, teasing, etc., and has shut down	Check with bus driver for information on problems/triggers and/or have an adult ride bus to observe. Deal directly with teasing or bullying. Develop routines for where student sits (for example, have the same buddy sit next to him in the same seat, give student earplugs to muffle noise or a fiddle object to touch, use a social story to explain bus routines and rules). Let student be first or last to get off bus. Identify a specific target behaviour and pair reinforcer with it. Have familiar adult accompany student into school.
	• does not remember what he likes at school or • does not like anything at school or • does not like hallway noise and/or confusion of removing outerwear and/or the first activity of day	Use visual at home to remind student of familiar people or favourite activities at school. Have adult greet student at door of bus or school with photo or valued object. Give student object to bring on bus to put into a container, add to a puzzle, etc., on school arrival, and then reinforce. Modify school entry to accommodate sensory difficulties. Ensure that first activity of the day is something he likes.
	• is upset because of alterations in morning routine at home, hunger, tiredness because of sleep disturbance, separation from parent	Problem-solve with parents to identify and reduce stressors. If possible, ask parent to telephone school to warn of stressors. Use home-school communication book consistently. If student is verbal, he may like to telephone parents on school arrival.

Following School Routines: Difficulty lining up

Action	*Possible Reasons*	*Strategies*
• refuses to line up	• is overwhelmed by noise, confusion, and/or movement or • is afraid of being touched or bumped in line	Let student enter without lining up. Involve student in process by letting him hold the door open or ring a bell and then enter last. Desensitize student by letting him observe the lining-up process, gradually moving closer. Reinforce effort.
• insists on being first or last or • insists on the same order of students in line every day	• needs to repeat the same pattern to feel secure or • may over-generalize, assuming that the way things were once is the way they should always be	Explain lining-up rules and the concept of "sometimes"; use words and/or visuals and/or social stories as appropriate. Let him play with toys representing kids lining up, giving them names and rearranging them to increase comfort with routine.

Following School Routines: Runs away

Action	*Possible Reasons*	*Strategies*
• bolts or runs away from adult	• wants to be chased to get social interaction or • wants predictable adult reaction, even if negative or • enjoys physical release of running in open space	When possible, shadow student closely enough to prevent running. Hold his hand (or have him put his hands in his pocket, or clasped behind his back, or let him carry something with both hands if appropriate). Use social story or script ahead of time so that he knows what he is expected to do. Reinforce success. If student runs, retrieve him and return to where he started in a matter-of-fact manner with no excess words. Script again. Reinforce when he complies. Look for ways to incorporate more "chase-me" games, fun interaction with adults/peers, general movement, and running in the right settings.
• runs to favourite settings in school (for example, Kindergarten, bathroom, staff room) whenever he has a chance	• wants to get to a more familiar and/or enjoyable setting, or one of perseverative interest (for example, bathroom plumbing, parking lot with interesting license plates visible from staff room window, computer room)	Script and shadow as above. Build access to these favourites into schedule as reinforcers. Observe objects/activities he runs to and make them available in regular setting as part of his schedule, or use them as reinforcers to reward expected behaviours.

Following School Routines: Screams in classroom or hallway

Action	*Possible Reasons*	*Strategies*
• screams loudly	• self-stimulation; enjoys echo or sound or • enjoys the sense of control and predictability or • routine or habit	Keep reaction low-key. Use visuals/words/social stories, as appropriate, to show expectations. Give student opportunities to experiment with controlled sound (screaming, music, instruments) in appropriate setting. Practise walking in empty hallways while doing something incompatible with screaming (for example, whispering songs or numbers); reinforce success.
	• is over-stressed by classroom noise or movement in hallways	Desensitize student to noise and movement. In classrooms, try environmental modification such as tennis balls on legs of desks and chairs to decrease noise.
	• has learned that he is removed from settings if he screams	Teach him alternate ways to communicate overload. Respond predictably and quickly so that he learns that another communication method works. Persevere in your setting, because this behaviour is likely to be randomly reinforced in other settings.

Following School Routines: Classroom entry

Action	*Possible Reasons*	*Strategies*
• runs immediately to activities other than desk or carpet	• enters room with one fixed idea or memory of what he wants to do or • likes other activities/ areas better than what happens in his desk or on the carpet	Have a "landing spot" (for example, carpet square just outside or just inside classroom door); use visual script of what to do first. Be sure student understands visual schedule; show he will have access to valued activities soon. If necessary, shadow him to his place and reinforce/praise.
	• Is disoriented or over-stimulated (for example, noise; motion; daylight; flickering fluorescent lights; odours; change of flooring)	Use "landing spot" and shadowing, as above. Always use the same carpet square in the same location and mark his desk in some easy-to-see way. Be aware of sensory issues (for example, use shades/curtains to control light in room; try a less chemical-smelling cleaning solution). Give him a marked "travel path" to his area and practise in empty room. Sensitize others to his difficulty.

Following School Routines: Moves constantly

Action	*Possible Reasons*	*Strategies*
• can't sit on carpet or in desk without constant squirming, sprawling, kicking, pushing, leaning on others, etc.	• lacks motor tone/ skills/balance/strength to sit for more than a few minutes or • craves tactile/vestibular input	On floor, use carpet square to mark place or let him sit against a wall, or other support, or on a chair. For young children, expect only 3-5 minutes on carpet to begin and increase expectations as possible. Reinforce success. In desk, ensure that student's back is supported and that his feet rest firmly on floor or other support. Provide frequent activity breaks in and out of the classroom (for example, returning sheets to a "finished" box one at a time, running errands, doing in-school work jobs). Consult occupational therapist for strategies (for example, weighted vest, adaptive seat cushions, activities to increase stamina and strength).
• leaves desk frequently to wander to other students' desks, touching or grabbing materials, trying to interact, disrupting instruction	• tasks are beyond ability or not adequately reinforced or • too much sedentary time is expected	Redesign tasks or reinforcers. Reinforce student for every brief period spent in desk, and provide frequent activity breaks in and out of the classroom (for example, returning sheets to a "finished" box one at a time, running errands, doing in-school work jobs).
	• wants more social interaction with peers	Structure more opportunities for this interaction into student's schedule and teach him appropriate ways/times to interact.

Following School Routines: Resists required tasks

Action	*Possible Reasons*	*Strategies*
• resists all adult direction or • resists structured activities, table-top, or desk tasks or • wants to wander independently in classroom or • moves away or screams whenever anyone comes close	• may not feel comfortable or secure with adult	Develop relationship with student before making demands. Learn and use materials/activities that naturally interest him. Give student chances to explore classroom without others present. Gradually introduce structure using visual system and allow much access to valued reinforcers within structure.
	• sees movement of people around or toward him as closer or faster than it is, and feels threatened because of visual perception problems or • sensitive to odours of perfume, after-shave, coffee, etc.	If he doesn't want anyone to come close, try doing an activity, or using materials that you know he likes a few feet away, or try imitating any action he does. Gradually move activities closer to child. Observe sensory sensitivities and plan accordingly.
	• does not understand "first/then" (i.e., doing something to get something he wants)	Use brief teaching sessions with material/activity student already likes (for example, stacking blocks and knocking them down). Teach student to do task, then reinforce him by allowing something he likes even more. Gradually increase time-on-task and complexity of tasks and pair social with tangible reinforcers. See "Resists Academic Assignments" for discussion of teaching an activity.

(continued)

Following School Routines: **Resists required tasks** (continued)

Action	*Possible Reasons*	*Strategies*
• resists structured activities, table-top, or desk tasks and/or adult direction or • wants to wander independently in classroom or • moves away or screams whenever anyone comes close	• has not developed enough sense of routine to know what is expected of him or what comes next or • doesn't know what "finished" looks like	Use visual schedule at student's level of comprehension. Begin with tasks with a clear beginning-middle-end (for example, few inset pieces into a puzzle, or blocks to be matched to a card pattern). Put task in a plastic container and move it out of sight when finished and give reinforcer. Gradually add more tasks to each container, and add more containers.
	• recognizes task as something unfamiliar, unpleasant, or not successful in the past	Introduce new tasks gradually and gently but persevere, in order to desensitize student to "new" and to expand his repertoire. Reassure verbally or with a social story as appropriate about trying "hard new things."
	• does not have motor planning or coordination needed for task	Teach student to "watch and do the same," beginning with one-motor-action tasks, if required. Break tasks into small steps and teach each one. Observe how student learns best (for example, watch and imitate; self-talk his way through steps; follow graphic or written scripts for steps in sequence). If student is distractible, do this initial work in a one-to-one setting until mastered, then try it in the classroom.

Following School Routines: Resists academic assignments

Action	*Possible Reasons*	*Strategies*
• very resistant to doing academic assignments (for example, math problems, writing); doesn't seem to care about doing well, getting good grades, or earning rewards	• has learned that he can safely "wait out the clock" with no meaningful consequences; is more comfortable/less anxious engaged in alternate activity (for example, playing, reading, drawing) than in making the effort necessary to do the task or • doesn't value "pleasing" adults and/or doesn't understand that work completion pleases adults	Ensure that work is within student's ability. **DO NOT ASSUME**. Good rote memory may mask significant weaknesses in comprehension of written or spoken language, location skills, concepts, etc. Based on your knowledge of student's ability, adjust quantity and/or demands of work so that student can complete tasks or parts of tasks in allotted time with reasonable effort. Increase expectations very gradually. Use graphic organizers, outlines, sentence, story-starters, etc. to structure assignments. Let student choose factual rather than imaginative writing topics (for example, don't ask him to pretend to be another person). Allow student input (for example, deciding which tasks to do first, suggesting positive and negative consequences). Try always to have student work to gain positives rather than to avoid negatives. Strengthen relationship between student and key adults at school. Collaborate with parents regarding homework.

(continued)

Following School Routines: **Resists academic assignments** (continued)

Action	*Possible Reasons*	*Strategies*
• very resistant to doing academic assignments (for example, math problems, writing); doesn't seem to care about doing well, getting good grades, or earning rewards	• lacks internal motivation to "get them all right" or to "do what everyone else is doing"	Try a written social story to explain how school works and a written contract. Connect assignments to previously learned material (or topics of interest); explain why it is important that he learn it or master the skill. Appeal to his sense of status as a "Grade _ guy" or as an "almost teenager" who can now do harder work. Take advantage of student's (probable) rigidity by presenting expectations as rules that everyone has to follow. If he is at all motivated to "be like" classmates, train a peer buddy to discuss assignments, share results, provide praise, etc. Acknowledge that it is hard for him to make the effort and collaborate with him to generate lists of possible "celebrations" when he reaches various goals.
	• is more internally reinforced by concentrating on perseverative thoughts, or ability to feel in control of the situation, than by any external reinforcers	As possible, introduce some element of his perseverative interest into the task. Give access to his perseverative activities as reinforcement for task completion. Agree before time on a time limit (for example, 10 minutes) or an activity limit (for example, draw one dinosaur). Give student as much control as possible. Strengthen relationship between student and key adults at school.

(continued)

Following School Routines: Resists academic assignments (continued)

Action	*Possible Reasons*	*Strategies*
• very resistant to doing academic assignments (for example, math problems, writing) and • perfectionist; must always get a perfect score or the highest score	• feels so strongly that he must be, or is expected to be perfect and/or to compare well to others that he prefers not to try rather than to risk failing to meet his own, or someone else's standards	Ensure that work is within student's ability. **DO NOT ASSUME.** Good rote memory may mask significant weaknesses in comprehension of written or spoken language, location skills, concepts, etc. Increase student's tolerance for "less than perfect is OK" by having others model making mistakes and then correcting them calmly, or re-thinking a previous decision and then making a better plan. Work casual references to weaknesses and imperfections (his own and others) into conversations in order to model the point of view that these are normal and acceptable parts of everyone's life. If he responds catastrophically to situations such as tests, discuss his understanding of what other people expect and reassure him. Help student set goals for himself that are benchmarks toward larger goals so that he can learn to reach success step by step, rather than see only complete success or complete failure. Help student set different goals or expectations for different situations, such as grades in class subjects or performance in sports. Debrief whenever something goes well. Praise student and specify what he did well. Teach him some catchphrases to use to praise himself and make a game of having him practise with you. Do everything possible to boost his self-esteem.
• refuses to do homework	• is exhausted by demands of day at school (however little he actually accomplishes) or • sees school work as belonging to school, not to the home setting	Rather than use "complete it as homework" as a consequence for not completing work in class: • ensure that work is within his ability • determine other possible reasons for refusal and plan strategies accordingly • reduce expectations for task completion and experiment with different reinforcers See <www.tonyattwood.com.au> for a discussion of homework

Following School Routines: Prefers familiar activities

Action	*Possible Reasons*	*Strategies*
• gravitates to familiar, perseverative activities between tasks or during unstructured times; is difficult to re-engage or redirect	• has limited repertoire of ways to enjoy himself and feels anxious if not busy or • uses perseverations to meet a sensory need or to avoid interactions or task demands	Expand student's repertoire of activities so that he has many ways to enjoy himself other than perseverations. Use a visual schedule of choices when he has free time, or has finished work, and teach him to use it to indicate a choice to someone rather than just going to an activity. Incorporate some elements of his perseverations (for example, lining up blocks, airplanes, sports statistics, collecting facts about dinosaurs) into tasks. Ensure that sensory needs are met as part of daily schedule. Ensure adequate "down time" away from demands for interaction; provide reinforcers that are appropriate and delivered frequently enough, and possibly varied so that he remains interested. Use controlled access to perseverations as reinforcers for task completion, learning by trial and error, how long is too long. Use timer if necessary.

Following School Routines: Perseverates

Action	*Possible Reasons*	*Strategies*
• uses toys perseveratively (for example, spinning car wheels or moving toys in front of lights), but doesn't play with anything the way others do	• has limited repertoire of activities because he – is too distractible to stick with an activity long enough to master it – has low frustration tolerance, needs instant cause-effect feedback – can't motor plan or control movements, especially in multi-step or unrehearsed tasks – has such a strong drive for one kind of sensory stimulation that he resists learning to use materials in any other way – uses perseveration as a sort of sensory buffer to screen out other stimulation, avoid interaction, or calm himself when he doesn't know what to do next – uses passive dependence to get adult attention	Observe student in an environment with many activities, and see what he independently chooses or does. Prioritize activities that • fit with his attention span, frustration tolerance, and motor skills • can be done in many settings • are popular with other students of his developmental age • eventually can be done with others For step-by-step instructions on teaching an activity, see "Resists Academic Assignments."

Following School Routines: Demands one-to-one attention

Action	*Possible Reasons*	*Strategies*
• falls apart behaviourally or refuses to do tasks if adult does not sit next to him at all times, or if adult attends to other students	• is extremely dependent on key adult for security and predictability	Once student has established a good relationship with one adult, help him relate to one or more new adults, using "relationship-building" techniques that worked the first time. As appropriate, use social stories to explain "turns" and "big kid" behaviours.
	• feels entitled to constant one-to-one attention or feel jealous because adult is "his" or • resists this change because he resists any change	Use visual schedule to show student when he works with which adults during his day, and pair less familiar adults with highly desired activities. Use visuals to warn ahead, as possible, of staff absences and the presence of less familiar adults. Wean from one-to-one attention very gradually. Teach student to do one thing alone and then signal adult for attention, gradually increasing independent time on task so he learns to pair adult attention with accomplishment, rather than with helplessness or off-task behaviour.
	• has no appropriate ways to get or reclaim adult attention	Teach appropriate ways to get adult attention. This may need to be practised in a one-to-one setting. Initially respond instantly to student's "appropriate" communication, but teach him the need to "wait" as well.

Following School Routines: Dependent on adult

Action	*Possible Reasons*	*Strategies*
• follows routines successfully during time educational assistant (EA) is in room, but refuses tasks when EA is not there	• is completely dependent on EA's presence and/or is anxious without it	See previous suggestions to avoid over-dependence.
	• does not understand language and/or system used by anyone else to explain expectations because he has only learned to understand EA's language/system or • has learned to understand instructions delivered by someone sitting very close to him and not standing at front of classroom	Ensure that specific strategies used by EA to get attention and give instructions are written down and used by other people. Use a small group setting to help student learn to focus and listen as adult delivers instructions while standing a little distance away, rather than sitting next to him. Gradually increase distance. Structure classroom so that student attends to teacher instruction, with EA repeating or breaking down instruction as necessary. Have him take finished tasks or papers for teacher approval so that he knows that he gets both instructions and praise from more than one person.
	• has a rule for himself that he is only "supposed" to follow instructions from one person	Use social stories as appropriate to explain the "rules." Train peers to imitate helping behaviours of adults, being careful not to make student over-dependent. Train student to communicate need for help to peers and other adults.
	• reinforcers for task completion are not appropriate or are delivered too infrequently	Be sure that both concrete and social reinforcers continue to be available on a schedule that is effective. Usually this will mean many times daily, rather than "15 minutes of computer time at 3:15."

Following School Routines: Won't look at teacher

Action	*Possible Reasons*	*Strategies*
• will not look at teacher when he or she is talking or • will not look at what is being shown (book, overhead, writing on board)	• not able to use vision and hearing simultaneously **Note:** Do not interpret this behaviour as ignoring or deliberately tuning out unless you have good reason to believe it is.	Find ways to allow student to look/touch/explore in silence for as long as needed before listening to explanations or instructions. When this is not possible, allow student to look away or put his head down, and let him look at the visuals later in silence. As student's skills become stronger, teach looking and listening at the same time as this becomes more important as student gets older; accept that student may never do this well, however.

Following School Routines: Inattentive; distractible

Action	*Possible Reasons*	*Strategies*
- inattentive; distracted by every tiny sound, smell, movement	- is much more aware of sensory stimuli than others; is unable to screen or not attend to sensory stimuli	Try to arrange environment to minimize distractions (for example, changes in level of stimuli such as noise, light, chemicals used to clean rooms, classroom activities that produce smells or sudden noises, proximity of classroom to sources of smells such as popcorn or food cooking). Experiment with ways to baffle background noise (for example, let student wear cotton balls in ears held by headband, earplugs, earphones). Experiment with slightly angled rather than flat work surface. Provide student with a non-distracting environment for seatwork, such as a carrel or a desk against a blank wall. If student ignores some distractions but focuses on every social interchange, read this as a desire for more social contact and program accordingly. Warn student ahead of time of events such as fire drills. Provide frequent breaks in low-stimulation environments.
	- loses focus because he is too far from speaker	Experiment with seating; seat student close to where teacher usually stands to speak. Seat student in the front to listen but in a study carrel facing the wall at the back of the class to concentrate on written work.

Following School Routines: Disruptive

Action	*Possible Reasons*	*Strategies*
- makes distracting, disruptive noises in classroom and other school environments	- self-stimulating to fill unstructured time or - sensory pleasure or - response to stress	Provide tight structure. Provide area in or out of classroom for self-stimulation to meet need. Observe to identify stressors and make changes as appropriate.
	- is consciously trying to get a reaction from peers or adults (laughter, scolding, class quiets to listen) or to be removed from the setting	Sensitize peers and adults to possible reasons for the behaviour and avoid reinforcing by responding. Use a social story or other means to explain why noise is distracting to others and what expectations are. Provide other opportunities for the student to get an animated response from peers. Re-adjust tasks to ensure success if the student seems to be trying to escape tasks.
	- is echoing noises in environment, including soft noises (for example, murmur of voices from another room, the bubbling from a fish tank)	Ignore; accustom other students to ignore. Distract student with engaging task; reinforce behaviours incompatible with making the noise.
	- has Tourette's Syndrome or is responding to side-effects of medication and is unable to inhibit noises	Collect data, discuss with parents and other caregivers, and refer for assessment and medical monitoring as indicated.
	- needs auditory feedback from reading aloud or talking himself through tasks	Sensitize others to his need and try to ignore. Reinforce lower speaking volume.

Transitions: Changes in environment

Action	*Possible Reasons*	*Strategies*
• becomes upset or tantrums whenever there is change in the classroom (for example, rearranging seating or bulletin boards)	• sees classroom as a unified whole; a small rearrangement seems like a completely new environment	As appropriate, explain reasons for changes and involve student in making them. Remind student to expect changes (for example, Halloween decorations) before he enters the room. Keep some consistency (for example, have student's work space or desk in the same place and facing the same view).

Transitions: Changes in activities

Action	*Possible Reasons*	*Strategies*
• becomes upset or tantrums when class changes from one activity or subject to another	• has a different idea of "finished" than others (for example, feels he can't start spelling until he has finished his math assignment)	Always use visual schedule. Teach him a routine using words, symbols, signs, etc., to warn him that a change is coming (for example, "almost finished"). Show student object (symbol or print) representing the next activity. Until his tolerance for change improves, try to do activities/tasks that can be finished in one session. Use visual strategies (for example, clear away art materials when art is done rather than leaving them out; circle the math problems done and highlight the ones that can be finished "after recess"). Acknowledge student's distress and frustration.

Transitions: Changes in settings

Action	*Possible Reasons*	*Strategies*
• becomes upset or tantrums when class goes somewhere else in school (for example, gym, library, music room)	• needs more time to understand where he is going, what will happen there, and that he will come back to his "home base" again	Always use visual schedule. If changes of setting are always hard, try having a calming/organizing activity or some down time right after the stressful change. Try having student carry a comfort object or something to be used in the other setting. Let student familiarize himself with the other setting with no one else in the room. Observe to see if he has difficulty with some sensory aspect of the other environment, such as climbing stairs.
	• is exhausted or overloaded (depending on the time of day)	Observe; check with student if he can communicate. Build in more calming/organizing periods to help increase tolerance for stress and change. Build in rest periods if needed; check whether student is hungry.

Transitions: Resists all changes

Action	*Possible Reasons*	*Strategies*
• resists any change, even to a favourite activity or one previously enjoyed	• anxiety; is anxious no matter how regularly a change occurs or how much warning he receives	Use above strategies. **Persevere.** Consult with occupational therapist regarding appropriate relaxation techniques; teach student to recognize his own feelings of anxiety.
	• knows from experience that he becomes over-stimulated in an activity (for example, gym or computers) and loses control (i.e., becomes silly, or loud, or starts flapping) • if student is sensitive to the way he appears to others he may resist going to the activity	See above. Let student get a little bit excited in a safe environment to learn to be aware of the feeling and to control the behaviours. Involve student in writing a social story that acknowledges his feelings and contains some strategies to help him manage his arousal level. Sensitize others to student's over-stimulated behaviours.
	• has difficulty with motor planning; is anxious about negotiating a different physical setting	Provide student with a regular seat in all environments. Let him practise in the new setting with no one else there.

Anger Management: Self-injurious

Action	*Possible Reasons*	*Strategies*
• self-abusive (for example, bites or scratches self, bangs head with fist, bangs head into walls)		Do a functional behavioural assessment to determine the purpose of the action for the student and its antecedents and consequences.
	• is in pain (for example, headache, sore throat, toothache) and has no other way to communicate	Observe carefully and try to reduce discomfort as possible. Discuss with parents and refer for medical treatment as necessary.
	• is reacting to sensory discomfort but has no verbal or other way to communicate pain, anger, frustration, or confusion • may not see any reason to communicate pain or distress to others	Observe carefully and try to reduce discomfort if possible. Teach student that he can communicate distress to people and that they can help. Continue to work on communication system.
	• has high pain threshold; behaviour is habit or a form of self-stimulation	Try to redirect to another activity incompatible with the self-stimulation and reinforce.
	• learned behaviour to get adult reaction/attention, or escape, or avoid a demand or situation	Ensure that no one in student's environment reinforces behaviour with attention or reaction. Be sure that task or environmental demands are within student's ability to manage and that reinforcement is appropriate.

Anger Management: Aggressive

Action	*Possible Reasons*	*Strategies*
• physically or verbally aggressive to others (for example, bites, hits, head-butts, spits); destroys materials; insults, name-calls		Do a functional behavioural assessment to determine the purpose of the action for the student and its antecedents and consequences.
	• has no way to communicate pain, anger, frustration, jealousy, confusion, anxiety, sensory discomfort	Observe carefully and try to reduce discomfort as possible. Teach alternate ways to communicate. Adapt expectations or environment as appropriate. Discuss with parents and refer for medical treatment as necessary.
	• has no other strategies to calm down, or reduce anxiety or anger	Intervene early.
	• learned behaviour to get adult reaction/attention, or to escape, or avoid a demand or situation	Ensure that no one in student's environment reinforces behaviour with attention or reaction. Be sure that task or environmental demands are within student's ability to manage and that reinforcement is appropriate.

Anger Management: Swears

Action	*Possible Reasons*	*Strategies*
• swears whenever he loses control or is frustrated, in any setting in school	• has no alternative ways to communicate frustration or • associates swearing with angry feelings because he has heard those words used by others in that context	Teach alternative ways, verbal or otherwise, to express frustration. Be sure that task demands are understood and are not too difficult or too unpleasant for sensory reasons. Observe environment to see if sensory issues are overloading. **Note:** Don't expect this behaviour to extinguish quickly.
	• has learned that swearing is an effective way to escape tasks or situations, or to get his way	Use choice-making situations to teach acceptable ways to say "no"; honour choices when possible. Use more powerful reinforcers so that student has more success complying and being reinforced.
	• enjoys the drama and predictability of adult responses	Use value-neutral words and responses. Keep reaction low-key and increase animated reaction to other behaviours.
	• has Tourette's Syndrome or is not responding to medication	Collect data; discuss with parents and other caregivers. Refer for assessment if necessary.

Anger Management: Tantrums

Action	*Possible Reasons*	*Strategies*
• tantrums if he hears the word "no" (for example, "you can't" or "that's not correct")	• habit; tantrums whenever he hears the trigger word, even if it's not directed to him	Avoid using the word, as possible. Acknowledge his communication and redirect (for example, "first/then"; "that's close, let's look at it again" instead of "no" or "that's wrong").
	• assumes that if he follows the rules and communicates clearly, his needs and wishes will always be met	Use a social story and trial and error to teach him the concept of "sometimes" and to develop his capacity to tolerate frustration or delay gratification.
	• has learned that tantrums work	1. Wait out tantrum. 2. Remove him from area if necessary or remove other students from setting. 3. Then try above strategies.
• goes limp and falls to the floor screaming when a demand is made or he can't have his way	• has learned that this works to avoid demands, or get his wishes met	When possible, ignore and wait, then repeat expectation, modified if necessary; try to structure expectation to make compliance easy so that he can be reinforced. If student cannot be ignored, move him with as little interaction as possible to a safe location; then try above strategy.

APPENDIX D: AUTISM SPECTRUM DISORDER INVENTORY

How to Use this Appendix

This appendix is intended to provide team members with a tool for gathering information about the student with ASD. It explores the primary characteristics and associated features of ASD described in Chapter 1.

- **Social relationships** (pages 87-88): explores how a student relates to people in his environment
- **Communication** (pages 89-91): explores how a student interacts using verbal and non-verbal communication and visual supports
- **Restricted Behaviours/Interests** (pages 92-100): explores how a student relates to objects and activities, attends to activities, reacts to structure and routine, and responds to reinforcers and motivators
- **Associated Features** (pages 101-104): explores common challenges to students with ASD, including sensory sensitivities, anxiety, resistance, anger management, problem-solving, independence, and academic achievement

Recommended steps for gathering information include:

1. Scan the inventory before you begin and prioritize sections for completion. It may not be necessary to complete the entire inventory. **Please note:** Completing the overview on page 86 is recommended.
2. Assign sections to the appropriate team member (for example, the Communication section may assigned to the team's speech-language pathologist). The inventory was not intended to be completed by a single person.
3. Agree upon a timeframe for completing the chosen sections. The team, for example, may determine that some sections are a higher priority than others and attempt to complete them in the short term. Other sections, while important, may be completed in the longer term.
4. Answer the questions in selected sections as completely as possible. Sources of information may include direct observation, school files, clinical reports, and so on. It may be necessary to set up activities or situations in order to gather the necessary information.
5. Summarize the gathered information using the *Inventory Summary Sheet* on page 105. This facilitates the process for developing the student profile and identifying priority learning needs, as described in Chapter 2.

Student ______________________ **DOB** ______________ **Date** __________________

Participants / Roles ____

____

Describe the student's typical day—what he does, where, with whom, with what level of support.

Identify which parts/activities of the day/week are:

A. successful/meaningful/pleasant for the student and done with most independence

B. fairly successful with a lot of support

C. generally problematic, requiring complete one-to-one support, or often involving resistant or non-compliant behaviours from student

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Autism Spectrum Disorders Inventory prepared by Autism Service, Health Sciences Centre.

Social Relationships: Responses to People

Describe student's responses to people. For instance, does student:

- try to keep space between himself and other people, or seek physical closeness to (clinging to, standing next to) students/adults?

- use peripheral vision well to watch actions of others without seeming to look?

- seem to like a particular student/adult in your setting? Who? Any idea why?

- try to connect with other students through play or words but somehow always "gets it wrong"?

- respond with awareness/mild concern?

- use strategies to engage or re-engage attention of adults or peers? Or...?

Social Relationships: Social Understanding/Skills

How/how well does student:

- understand/predict other people's reactions?
- understand impact on others of his own actions?
- attempt to interact socially with peers/adults?
- respond when social attempts are not successful (repetition of his strategy, anger, withdrawal, depression, or...?)
- handle losing in a game?
- participate in group or co-operative learning/class projects/teams? Or...?

Social Relationships: Imitation/Turn-Taking

How/how well does student imitate words or sounds? Gestures or actions? Actions with an object?
Will student imitate adults/peers without prompting, such as lining up when others do, or picking up and using actions such as "high-five" or verbal expressions?
Is imitation immediate or delayed? Different for verbal/motor?
What has been tried/what works to improve ability to imitate?
Describe turn-taking skills with adults. Peers? With what activities?
What works or has worked to improve turn-taking?

Communication: Receptive

Describe kinds of verbal directions student can follow: one step? multi-step? With or without gestures or visual cues? In non-distracting setting only, or in many settings?
Is there a delay for responding to words? To other sounds or visual cues? How long? Worse in a distracting environment?
Describe ways in which student can take in information—spoken words, photos or line drawings, print, demonstration, other? What works best? Can he look and listen at the same time, or does he look away or put head down to listen.
How can you tell that he has understood what he has heard? Does he seem to be aware when he has not understood? How does he communicate confusion?
Describe any situations in which student has seemed confused by figurative language/slang/multiple meanings/humour.

Communication: Visual Supports

How/how well does student make use of visual supports in his environment?
Non-verbal communication (body language, facial expression, body proximity, gesturing, pointing, eye contact, eye gaze, eye shift...)?
Natural environmental cues (placement of furniture or objects such as "finished paper" box, printed material such as signs, logos or pictures, actions of others such as students lining up, or...)?
Organizational and information-giving tools (calendars, TV guide, menus, illustrations, written instructions or directions, or...)?
Specially designed tools (picture or written phrase book to cue speech, pictures/words for steps in a task, menu of choices for free time, problem-solving visuals, or...)?

Communication: Expressive

In what ways/how successfully does student communicate?

- to get needs met?
- to engage socially?
- to participate in conversation?
- to protest?
- to make choices?
- other?

Does student communicate need for help? How? To whom? In what situations?

How/how well does he use non-verbal communication (facial expression/body language/gestures)?

Restricted Behaviours/Interests: Motivation

Kinds of Activities/Materials Enjoyed
Tactile: sand, water, macaroni, rice, finger-paint, plasticine or playdough, slick surfaces such as photos or magazine pictures, vibrating toys, soft fabrics or plush, or…
Edible: Candy, cereal, raisins, potato chips (or other salty foods) or food of only a particular texture such as soft or crunchy, liquids, or…
Visual: tops, helicopters, fans or other things that spin, Marbleworks™ or other toys whose parts move, bubbles, kaleidoscopes, flashlights, toys which open and close such as Jack-in-the-box, books or pictures, computer or electronic games, having adult exaggerate facial expressions or imitate student's movement or actions, or…
Auditory: musical instruments, bells, music tapes/CDs, taped books, singing, having adult change voice tone or pitch, having adult imitate student's words or sounds, listening to sounds made by shaken material or to objects which distort the voice or to sounds made by electronic or computer games, use of familiar slang or repetitive expressions, or…

Restricted Behaviours/Interests: Motivation

Kinds of Activities/Materials Enjoyed
Gross Motor: rough and tumble play, being rolled tightly in a blanket or squeezed into small spaces, running, spinning, rocking, jumping on trampolines, rebounders or hop balls, dancing, riding on bikes/trikes or scooter boards, in wagons, or…
Fine Motor: drawing, painting, plasticine, shape sorters, puzzles, lining up small objects, stacking or nesting objects, inserting objects into small spaces, or…
Cognitive: books, letters, numbers, academic games, worksheets, collecting facts about certain topics, getting a high score, a good grade or an award, access to materials of particular interest to him, access to free time, being allowed to control his own schedule or set the agenda, being allowed to concentrate on mental perseverations, or…
Social: Spending time with a particular peer or adult, being allowed to talk to someone about topics of his interest, having a group of students pay attention to him, being able to make people laugh, taking a directive role in activities, or…

Restricted Behaviours/Interests: Exploratory Style

Describe how student explores an environment with many activities/materials.

- Preoccupied with some solitary non-play behaviour?
- Passive, waits for adult cueing?
- Reverts to some familiar verbal or physical routine every time he enters area?
- Seems to need to touch or move everything in the room before settling with one thing?
- Picks one activity (the first time, or every time) and resists leaving it for anything else?
- Approaches adult for attention or involvement?
- Does something provocative to get adult attention? Or…?

Restricted Behaviours/Interests: Play/Activity Skills

Describe student's play behaviour.

- Chooses age-appropriate activities or…
- Plays appropriately with toy/activity or…
- Plays alone only or plays in parallel/interactively with adults/other students or…
- Shows pretend play spontaneously/after demonstration or…
- Plays games with structured rules: if so, how was he taught to do this?
- Shows enjoyment of activities with adults/peers for the interaction itself? Which activities? With which people?
- Seems to feel that winning is the only reason to play a game?
- Acts to get predictable attention from peers, even if it is laughter or scapegoating?

Restricted Behaviours/Interests: Structure/Routine/Repetition

Daily Schedules

To anticipate his daily schedule, how does the student make use of:

- actual or symbolic real objects?
- photographs?
- line drawings, coloured or black and white?
- written words?
- verbal/non-verbal/signed explanations from adults?
- watching and imitating other students? Or …?

Once a schedule is established, how does student manage changes?

- Becomes upset if schedule is changed?
- Wants to repeat the same schedule of activities every day?
- Relies on the presence of a familiar adult as his structure or schedule?
- Returns to a perseverative activity as soon as an activity is done or his time is unstructured?
- Shows distress at leaving a task or activity "unfinished"? Or…?

If the schedule or normal routine needs to be changed, what works best?

- Tell student well in advance.
- Tell him just before change occurs. Or…?

Describe approaches that have worked well to help student manage changes to schedules or routines, and approaches that have not worked well.

Restricted Behaviours/Interests: Transitions

Describe student's difficulty with transitions from:

- one part of room to another?
- one room or area to another?
- one activity or subject to another?
- one adult to another?
- different rules/expectations with different situations/people?

What works to handle problems with transitions?

- Verbal warning of coming transition?
- Non-verbal cue such as holding two fingers, then one finger up?
- Picture/drawing cue?
- Calling student's attention to peers and getting him to imitate?
- Showing object to be used for next activity?
- Letting him carry object to be used for next activity?
- Verbally or visually "finishing" the activity? Or…?

If transitions are/have been difficult for this student, what approaches were tried? What worked? What didn't work?

Restricted Behaviours/Interests: Instructional

What new activities or skills have been taught in your setting?
How were they taught—verbal instruction, demonstration by adult or student, written instruction, reading, hands-on experimentation or practice, watching videos, or…?
What supports are needed to help student transfer a skill from one setting/person to another?
How long or how many practices does the student usually need to master a new activity or to learn new information?
Does student understand "first….. then" (doing something to get something he wants)? If he understands, how well does he accept/work within this structure?
What kinds of skills/activities are the easiest for the student to learn? The hardest?

Restricted Behaviours/Interests: Motor Skills

How are student's fine motor skills for:

- manipulating small objects?
- dressing and other self-care tasks?
- paper/pencil/scissors/keyboarding tasks?
- using both hands at the same time?
- putting right amount of pressure on pencil, keyboard, etc.?
- age-appropriate games (cards, trading cards, board games, computer...) Or...?

Is student perfectionist about appearance or formation of his printed/cursive letters/numerals? How does he show this? Does anything help to increase his tolerance for imperfection?

How are student's gross motor skills for:

- Moving around classroom/home/community?
- Sports or activities requiring running, climbing stairs or ladders, jumping, balancing, use of balls or other equipment? Or...?

Restricted Behaviours/Interests: Attention

Attending and Focus

What are indicators that the student is attending to you?

- Student stills body movements or turns body toward you, even though he doesn't appear to look or make eye contact?
- Student follows your verbal/gestural directions? Or…?

What are indicators that the student has tuned out?

- Student's eyes glaze or seem to lose focus or to look through you?
- Student looks at something else?
- Student joins in conversations in which he isn't included or answers questions being asked to someone else in the room, even without looking at the other people involved?
- Student leaves seat or makes a particular physical movement?
- Student returns to a particular self-stimulatory action or a perseverative verbal topic or barrage of questions? Or…?

Refocus: What works to re-engage the student's attention?

Tactile/Proprioceptive/Vestibular:

deep pressure on joints, stroking, tickling, touching student's shoulder or hand, finger play or some other familiar interactive game, standing up and leaving area and then returning, gross motor activity, chewing something cold or crunchy, or…

Visual/Auditory:

bubbles, something that spins, changing light level in room, gesture toward task or reinforcer, gesture toward visual schedule; singing, changing pitch or musicality of voice, using a musical or noise-making toy, whispering, reducing noise in the room, verbal reminder or reinforcer of schedule or activities, having student repeat instructions or rules or sequence of tasks verbally, or…

Restricted Behaviours/Interests: Perseverations

Describe perseverative activities that student does (repetitive activities with no other obvious function)?

- Rocking or spinning his body or spinning objects?
- Lining up objects or looking at objects by squinting or using peripheral vision or moving his hands or objects in front of lights or in front of his eyes?
- Repeating things he has heard (songs, movie dialogue, or particular words/phrases?)
- Asking repetitive questions or fixating on one topic of conversation? Or…?

Does student seem to use perseverations to

- calm anxiety?
- signal overload/anxiety/confusion?
- meet need for a particular kind of stimulation?
- screen out distractions?
- avoid a task demand or avoid sensory input such as sound or light?
- fill a gap in his schedule? Or…?

Are you able to use any perseverations as rewards for task completion (rocking chair, completing puzzles, reading/drawing on favourite topics, talking to adult about favourite topics, or…)?

Associated Features: Sensory Sensitivities

Over-reaction	Under-reaction
Hearing Easily distracted by soft sounds or any background noise, covers ears, screams, gets anxious before predictable loud noise, or…	Doesn't respond to sounds, doesn't distinguish speech from other noises, creates constant or repetitive sound as if to stimulate self, or…
Sight Easily distracted by anything visual in environment, closes eyes or squints to avoid light or glare, uses peripheral rather than direct vision, responds as if threatened by movement around him, or…	Oblivious to light or things in his environment, bumps into people or objects as if they are not seen, has trouble tracking objects or people if they move, difficulty with eye-hand coordination and telling objects from their background, or…
Touch Has difficulty with light touch, activities such as hair-washing, teeth-brushing, or swimming, or materials such as sand, glue, many kinds of clothing, or…	Seeks deep touch or pressure, tight clothing or shoes, touches others to get information, doesn't understand personal space, high pain threshold, or…
Taste/Smell Eats a limited diet, difficulty swallowing, reacts to strong odours or to odours others don't notice, or…	Chews or mouths objects inappropriately, smells or licks objects or people, doesn't notice strong odours, or…
Vestibular/Proprioceptive Avoids or has difficulty with movement activities, especially those requiring feet off the ground such as climbing, walking from one surface to another, somersaulting, bending over to pick up object from floor; uses inadequate pressure to hold objects or to print; motor planning and sequencing of actions or speech, or…	Seeks constant movement, especially over-stimulating spinning, may deliberately bump into people or objects or sit down hard, may have low muscle tone and lean on people or objects, uses too much pressure to hold or touch objects, motor planning and sequencing of actions or speech, or…

Associated Features: Self-Management

Anxiety/Calming

In what situations/settings do you think the student feels anxious? How can you tell? What do you think may be the reasons for his anxiety:

- Not knowing what comes next?
- Different physical setting/different people?
- Fear of failing at the task?
- Fear of not being perfect or the best?
- Overwhelmed by environmental stimuli? Or…

Please list any approaches or methods that you have observed the student to use, or which adults have used, to help calm the student when he seems anxious/upset/overwhelmed.

Organization

What strengths/weaknesses does student show with organization or planning (work or living space, locker, belongings, time management, or…)?

Can student generate his own structure for managing time, sequencing and completing tasks, using free time, etc.? Will student accept someone else's structure?

Associated Features: Self-Management

Resistance
Is resistance seen with particular tasks or people or in particular settings or times of the day or times of year, or…?
Does student resist with passive withdrawal, verbal/physical aggression, or…?
Does resistance seem to happen because • task demand made before relationship established? • task involved something unpleasant for physical or sensory reasons? • task made no sense to student, or was too difficult or too large? • task had no meaningful reward attached? • student was over-stimulated or under-stimulated? • student resists anything new or any demands, familiar or new, as a reflex or habit? Or…?
What has been tried to manage resistance? What works? What doesn't work?
Anger Management
In what settings/situations does student seem to show anger? What triggers it? What are the first signs? What usually happens next? How long do outbursts last?
What approaches have been used by the student or by adults to manage student's anger? What works/doesn't work?

Associated Features: Self-Management

Problem-Solving/Independence

How does student respond to a problem or difficulty? Describe examples.

- Waits passively for help?
- Communicates need for help verbally/non-verbally?
- Tries one strategy over and over? Tries different strategies?
- Tantrums?
- Gives up immediately? Or…?

What problem-solving strategies have been taught to the student? What works? What doesn't work?

Have efforts been made to reduce student's dependence on adult assistance? In which settings? How is it working?

Associated Features: Approaches to Learning

Are student's comprehension skills for written material in academic areas (locating information, identifying main idea, sequencing, inferring, concluding, analyzing, math problem-solving) on par with his rote memory skills in those areas? How has that been assessed?

Does student show awareness (self-corrects, stops reading, or looks puzzled) when he has missed the meaning in what he reads, or is he reading just to get to the bottom of the page? Can he/does he ask adults/peers for repetition or clarification?

What strategies/techniques have been used to help student improve comprehension of written material or ability to solve math word problems?

Inventory Summary Sheet

Name ______________________________ **Date** ______________

Areas	Strengths	Priority Learning Needs
Social Interaction		
Communication		
Restricted Activities and Interests		
Associated Features Environmental Sensitivities Anxiety Anger Management Independence Academic Comprehension		

APPENDIX E: HUMAN SEXUALITY EDUCATION AND THE STUDENT WITH ASD

How to Use this Appendix

This appendix provides the team with a brief overview of issues facing students with ASD, a summary of strategies, and a selection of resources.

Overview

Although hormones and the physical changes of puberty usually arrive right on schedule, the student's emotional and social maturity may lag several years behind that of peers. The student may see the conversation and interests of peers changing in ways he doesn't understand, which makes him feel more isolated and lonely than usual. The student may try to imitate peers' actions or to repeat their language out of context, without understanding subtleties or anticipating other people's reactions. He may be confused or frightened by physical changes and mood swings but not be able to initiate questions or to seek out information independently as are more able peers.

Sexuality often becomes an issue for students with Autism Spectrum Disorder when

- the student shows outward behaviours, including masturbation, inappropriate touching of others, or inappropriate conversation
- adults recognize the student's need for knowledge and skills in areas of self-care and personal safety

For typically developing students, first lessons in sexuality are often learned incidentally as they interact naturally with other people, learn how to react to and to have an impact on others, to identify themselves by gender, to understand and regulate emotions and emotional expression, and to make friends.

Students with ASD will always have some degree of difficulty in communication and social interaction, regardless of cognitive development. In addition, they

- are not good incidental learners
- have fewer than average opportunities for everyday social interaction
- have more difficulty in interpreting what they see and in learning from experience

Following are some typical issues and suggested strategies.

Strategies

Behaviour

Student masturbates or fondles himself in classroom or other school settings.

Possible Reasons	Strategy
• enjoys the feeling; uses it for comfort when stressed, bored, etc.	• Collaborate with parents to agree on responses and strategies. • Observe to identify settings in which student uses behaviour and make changes in schedule or activities as required to reduce stress, increase structure and predictability, and introduce more enjoyable activities incompatible with masturbation. • Consider having child wear overalls or pants with snug waistbands, and reinforce other activities that need use of both hands. • As part of training regarding sexuality and hygiene, teach where and when masturbation can be done. • Ensure that student does not over-generalize behaviour as appropriate to "the bathroom" to include public washrooms. • Ensure that child's touching is not an indication of pain, such as from an injury or infection, or of discomfort from poorly fitting clothing, skin allergies, etc.
• enjoys predictable, animated response from others	• As above, be calm and neutral in tone of voice and facial expression. • Plan a common strategy and ensure that all school staff use, to avoid maintaining behaviour with social attention. • When possible, explain to peers that the student often does things without understanding that they are not "cool" or "grown-up," and that everyone has a responsibility to help the student learn how to act by not laughing or paying attention to inappropriate actions.

Behaviour

Talks about body parts (penis, vagina, etc.) in inappropriate settings or tries to look under other people's clothing.

Possible Reasons	Strategy
• may be repeating part of what he has been taught at home or has heard elsewhere, as a means to get more information • may just be trying to start a conversation • may be signaling confusion about puberty or changes in his own and others' bodies and changes in peer behaviour, and a need for information or reassurance	• Acknowledge what student has said in a calm, non-committal way and redirect student to another activity or topic. • After collaboration with family, use social stories to give student some simple rules to distinguish "what we talk about to family, doctor or nurse" and "what we talk about to friends" and where and when these discussions should take place. • Use similar approaches to provide explanations and rules for social norms regarding other people's clothing and bodies. • Provide instruction about sexuality, personal health, and hygiene at student's level of understanding. • Remember that student's physical maturity may be much more advanced than his interests, cognitive skills, or emotional maturity. • Ensure that student has adequate social attention and interaction with peers and adults. Increase focus on teaching social interaction skills. • Consider involving older student as "helper" in Family Life programs with younger children so that he hears information given at a language and cognitive level comfortable to him.
• may enjoy predictable or animated responses to what he says or does, and has learned from experience or observation that use of terms related to body parts or sexuality often fluster adults and get laughter and attention from peers	• As above, be calm and neutral in tone of voice and facial expression. • Plan a common strategy that all school staff use to avoid providing social reinforcement. • When possible, explain to peers that the student often says things without understanding that they are not "cool" or "grown-up," and that everyone has a responsibility to help the student learn how to act by not laughing or paying attention to inappropriate remarks.

Behaviour

Seeks affection inappropriately with familiar adults or peers (full body hugs, burrowing face into another's body, constant touching).

Possible Reasons	Strategy
• may be going through an affectionate stage that fits the student's developmental but not his chronological age; just as the student has learned to enjoy the experience, people don't enjoy it with him	• Use social story or resources such as the Circles Program (Champagne, 1993) to help child learn which kinds of affection are appropriate with different people in his world. • Teach the student some sorts of physical contact that is appropriate, and more ways to enjoy social interaction with adults and peers. • Provide opportunities for deep pressure and appropriate affection to meet sensory and social needs.

Behaviour

Indiscriminate with strangers, will talk to, accompany, be affectionate to anyone.

Possible Reasons	Strategy
• may see people as interchangeable sources of treats, stimulation, or attention	• See above. • Teach firm rules and practise them, perhaps using stand-in "strangers." • It is especially important that the student has as much social contact, warmth, and affection as possible from appropriate sources to reduce vulnerability to abuse. • Be prepared to provide ongoing supervision as student may never be "safe" with strangers.

Additional Resources

Most are available from <www.parentbookstore.com> or <www.exceptionalresources.com> (Canada) or <www.asperger.net> (US). Other sources are noted.

Champagne, M.P., and L. Walker-Hirsch. *CIRCLES: Intimacy and Relationships. Program 1 in the CIRCLES series.* Santa Barbara, CA: James Stanfield Publishing Company, 1993. This is a comprehensive video-based curriculum to teach special education students social/sexual concepts and rules of intimacy. <www.stanfield.com>

Faherty, C. *What Does It Mean to Me?: A Workbook Explaining Self-Awareness and Life Lessons to the Child or Youth with High Functioning Autism or Asperger's.* Arlington, TX: Future Horizons, 2000. This is an excellent resource with many forms and activities useful for individuals or groups.

Fegan, L. A. Rauch, and W. McCarthy. *Sexuality and People with Intellectual Disability.* Baltimore: Paul H. Brookes, 1993. Although not specific to ASD, this is a good basic text with lots of practical examples.

Gray, S., L. Ruble, and N. Dalrymple. *Autism and Sexuality: A Guide for Instruction.* Bloomington, IN: Autism Society of Indiana, 2000. This small pamphlet briefly discusses issues such as Developing an Individualized Curriculum, Prevention of Sexual Abuse, and Establishing a Menstrual Routine, and has references to more detailed resources. Available from Autism Society Manitoba.

Hingsburger, D. *I Openers: Parents Ask Questions about Sexuality and Children with Developmental Disabilities.* Vancouver, BC: Family Support Institute, 1993. This small book contains a lot of information and advice in Q & A format from an author who has written widely on this subject.

Newport, J., and M. Newport. *Autism – Asperger's and Sexuality: Puberty and Beyond.* Arlington, TX: Future Horizons, 2002. The authors both have Asperger's Syndrome and have written this guide to dating, relationships, and sexuality as if they were having a conversation with other AS adolescents or adults. This would be useful for parents/caregivers or as part of a family life curriculum in a school or counseling setting.

Segar, M. *Coping: A Survival Guide for People with Asperger Syndrome.* Nottingham, UK: The Early Years Diagnostic Centre, 1997. This informally written text discusses many aspects of "coping" with social expectations and social problem-solving from the perspective of a university graduate in biochemistry with AS speaking to others with AS.

Winner, M.G. *Thinking about You, Thinking about Me: Philosophy and Strategies to Further Develop Perspective Taking and Communicative Abilities for Persons with Social-Cognitive Deficits.* Shawnee Mission, KA: AAPC, 2000. This is a companion to the volume below, and would also serve as a hands-on workbook for professionals working individually or with groups on social-cognitive skills such as thinking out loud, perspective-taking, and social mapping. It contains a good bibliography and suggested activity resources. <www.socialthinking.com>

Winner, M. G. *Inside Out: What Makes a Person with Social Cognitive Deficits Tick.* Shawnee Mission, KA: AAPC, 2000. This text for professionals functions as a workbook for students with Asperger's Syndrome, High Functioning Autism, Non-Verbal Learning Disability, or Pervasive Developmental Disorder—Not Otherwise Specified. <www.socialthinking.com>

Wrobel, M. *Taking Care of Myself: A Hygiene, Puberty and Personal Curriculum for Young People with Autism.* Arlington, TX: Future Horizons, 2003. This ready-to-use curriculum guide includes a collection of social story examples of dozens of typical self-care and sexuality issues.

Websites

<www.autism.org/sexual.html>

<www.autismtoday.com/puberty.htm>

<www.aap.org/policy/01225.html>

APPENDIX F: FORMS

Student Assessment Checklist

Area	To Do	Who	Notes	Done
Hearing				
Vision				
Medical				
Dental				
Cognitive				
Primary Characteristics				
Social				
Communication				
Repetitive Patterns of Behaviour, Interests, and Activities				
Associated Characteristics				
Sensory				
Anxiety				
Resistance/Anger				
Problem-solving/ Independence				
Scattered Developmental Profile				

Building Consensus on Priority Learning Needs

In looking for consensus on learning priorities, ask whether the priorities being considered will lead to outcomes and activities that

- ☐ can be used in more than one setting or situation
- ☐ can be used now and in the future
- ☐ are likely to result in functional skills for the student
- ☐ promote independence
- ☐ create opportunities for meaningful contact and interaction with the student's peers
- ☐ fit the student's interests and needs
- ☐ improve communication
- ☐ improve the student's life at home and in the community
- ☐ match the student's learning strengths
- ☐ promote generalization
- ☐ promote inclusion

(Adapted from Falvey, M.A. *Community-Based Curriculum*. 2nd ed., 1989: 41-43)

	Gathering Information			
	What Do We Know?	**What Do We Need to Know?**	**How Will We Find Out?**	**Who Will Do It?**
Primary Characteristics				
Social				
Communication				
Repetitive Patterns of Behaviour				
Associated Characteristics				
Sensory				

(continued)

(continued)	Gathering Information			
	What Do We Know?	**What Do We Need to Know?**	**How Will We Find Out?**	**Who Will Do It?**
Anxiety; Resistance/ Anger				
Approaches to Learning; Interests, Preferences				
Problem Solving/ Independence				
Other Considerations				
Hearing				
Vision				
Medical				
Dental				
Cognitive				

Task Analysis

STUDENT'S NAME: ____________________

TASK: ____________________

Date											

______________________________'s Interpretation Dictionary

STUDENT'S NAME

What ____________ does	What it might mean	How to respond to ______________

(Adapted from British Columbia Ministry of Education, *Teaching Students with Autism: A Resource Guide for Schools,* 2000)

BEHAVIOUR SUPPORT PLANNING WORKSHEET

Student's Name ______________________ **Date** ______________________

Student is doing _____ or not doing _____. (how, when, where, how often, with whom)

Possible causes:

State alternative student will do (how, when, where, with whom, with what prompts).

BEHAVIOUR SUPPORT PLANNING WORKSHEET

Proactive Approaches	**Reactive Approaches**
Results	**Results**

SUGGESTED READINGS

SUGGESTED READINGS

About Suggested Readings

Suggested Readings is a selection of readings and resources about ASD organized into the major subject groupings identified below. Its purpose is to provide a sampling of current information about a range of topics concerning ASD. Many of these items were referenced earlier in the document, particularly Chapters 4 and 5.

Subject **Page**

Readings are listed in the following categories:

- Applied Behaviour Analysis 4
- Asperger's Syndrome (AS)/High-Functioning Autism (HFA) 5
- Autobiographies/Biographies 9
- Communication 11
- Early Development 13
- Education 15
- Explaining ASD 19
- General 22
- Parenting 23
- Related Disabilities 25
- Self-Management/Human Sexuality 26
- Sensory/Self-Regulation 28
- Social Relationships 30
- Social Stories 34
- Visual Strategies 35

- Sources 36
- Local Websites 37
- Other Websites 38

Applied Behaviour Analysis

Harris, Sandra L., and Mary Jane Weiss. *Right From the Start: Behavioural Intervention for Young Children with Autism.* Bethesda, MD: Woodbine House, 1998.

Leaf, Ron, and John McEachin, eds. *A Work in Progress: Behaviour Management Strategies and a Curriculum for Intensive Behavioural Treatment of Autism.* New York, NY: DRL Books, 1999. ISBN: 0-9665266-0-0. Softcover, 8x11, 344 pp. plus appendices.

This text provides a comprehensive outline of basic behavioural approaches, their application to children with ASD, and the use of discrete trial training.

Lovaas, O.I. *Teaching Developmentally Disabled Children: The Me Book.* Austin, TX: PRO-ED Inc., 1981.

– – –. *Teaching Individuals with Developmental Delays: Basic Intervention Techniques.* Austin, TX: PRO-ED Inc., 2003.

Focus on Autism and Other Developmental Disabilities 16:2 (Summer, 2001). Special Issue (untitled).

Martin, Garry, and Joseph Pear. *Behavior Modification: What It Is and How to Do It.* 4th ed. Englewood Cliffs, NJ: Prentice Hall, 1992.

Maurice, C. *Let Me Hear Your Voice.* New York, NY: Fawcett Columbine, 1993.

– – –. *Behavioral Intervention for Young Children with Autism.* Austin, TX: PRO-ED Inc., 1996.

Maurice, Green G., and R.M. Foxx. *Making a Difference: Behavioral Intervention for Autism.* Austin, TX: PRO-ED Inc., 2001.

Maurice, Green G., and S.C. Luce. *Behavioral Intervention for Young Children with Autism: A Manual for Parents and Professionals.* Austin, TX: PRO-ED Inc., 1996.

National Academy of Science Committee on Educational Interventions for Children with Autism. *Educating Children with Autism.* Washington, DC: National Academy Press, 2001. <www.nap.edu/execsumm/0309072697.html>

New York State Department of Health Early Intervention Program. *Clinical Practice Guidelines: Autism/Pervasive Developmental Disorders (Technical Report).* Albany, NY: New York State Department of Health Early Intervention Program, 1999. <www.health.state.ny.us/nysdoh/eip/autism/autism.htm>

Asperger's Syndrome (AS)/High Functioning Autism (HFA)

(see also **Explaining ASD, Social Skills**)

Aston, Maxine C. *The Other Half of Asperger Syndrome – A Guide to Living in an Intimate Relationship with a Partner Who Has Asperger Syndrome*. London: National Autistic Society, 2001. ISBN 1-899280-37-5.

This text covers practical topics including coping with AS, anger and AS, getting the message across, sex, and "AS cannot be blamed for everything." <www.asperger.net>

Attwood, Tony. *Asperger's Syndrome*. London: Jessica P. Kingsley Publishers, 1998. ISBN: 1-85302-5571. Softcover, 6x9, 224 pp.

This text includes eight chapters that cover diagnosis, social behaviour, language, interests and routine, motor clumsiness, cognition, sensory sensitivity, and frequently asked questions, with emphasis on practical suggestions and strategies. <www.TonyAttwood.com>

Attwood, Tony. *Why Does Chris Do That? Some Suggestions Regarding the Cause and Management of the Unusual Behaviour of Children and Adults with Autism and Asperger's Syndrome*. Shawnee Mission, KA: AAPC, 2003. ISBN: 1-931282-50-1. Softcover, 5x8, 80 pp.

This small text provides suggestions for behaviours associated with the major diagnostic features of ASD. <www.asperger.net>

Cohen, Shirley. *Targeting Autism*. Los Angeles, CA: University of California Press, 1998.

Cumine, Val, Julia Leach, and Gill Stevenson. *Asperger Syndrome: A Practical Guide for Teachers*. London: David Fulton Publishers, 1998. ISBN: 1-85346-499-6. Softcover, 8x11, 90 pp.

This text includes chapters that cover Assessment and Diagnosis, Educational Implications of Current Theories, Educational Interventions, Behavioural Interventions, and Precision in Assessment and Teaching. Checklists are provided for assessing social interaction skills, and suggestions are included for linking observation to programming. <www.fultonbooks.co.uk>

Focus on Autism and Other Developmental Disabilities. 15:4 (Winter, 2000). Special Issue (untitled).

Focus on Autism and Other Developmental Disabilities. 16:1 (Spring, 2001). Special Issue (untitled).

Gagnon, Elisa. *Power Cards: Using Special Interests to Motivate Children and Youth with Asperger Syndrome and Autism*. Shawnee Mission, KA: AAPC, 2001. ISBN: 1-931282-01-3. Coil-bound, 8x11, 63 pp.

This text describes a variation on the use of the social stories technique; real or fictional characters of special interest to the child are used to provide explanations or instructions, which are then condensed into a business card-sized Power Card which children with ASD can carry with them. <www.asperger.net>

Haddon, Mark. *The Curious Incident of the Dog in the Night-Time.* Toronto: Doubleday, 2003. ISBN: 0-385-65979-2. Hardcover, 5x8, 226 pp.

A literary mystery written from the perspective of a 15-year-old boy with AS, this novel could potentially be used with older AS students.

Howlin, Patricia, Simon Baron-Cohen, and Julie Hadwin. *Teaching Children with Autism to Mind-Read.* London: John Wiley & Sons, 1999. ISBN: 0-471-97623-7. Softcover, 6x9, 290 pp.

This text includes chapters that cover Teaching about Emotions, Teaching about Information States, Developing Pretend Play and Future Directions; includes all graphics and step-by-step instructions needed to teach the programs. <www.wiley.com>

Kowalski, Timothy. *The Source for Asperger's Syndrome.* East Moline, IL: LinguiSystems, 2002. ISBN: 0-7606-0473-8. Softcover, 8x11, 148 pp.

This is a general introduction to Asperger's Syndrome with many useful suggestions and checklists for interventions for typical difficulties in the school setting. <www.linguisystems.com>

Leicester City Council and Leicestershire County Council. *Asperger Syndrome: Practical Strategies for the Classroom.* London: National Autistic Society, 1998. ISBN: 1-9311282-08-0. Softcover, 8x11, 51 pp.

This is an easy-to-use problem-solving manual, with a format of identifying a typically occurring problem, providing some possible reasons and making brief management suggestions. It would be useful for parents and teachers. <www.asperger.net>

Meyer, Roger N. *Asperger Syndrome Employment Workbook: An Employment Workbook for Adults with Asperger Syndrome.* London: Jessica Kingsley Publishers, 2000. ISBN: 1-85302-796-0.

This workbook assists those with AS to understand the impact of AS on their employment experiences. <www.asperger.net>

Moore, Susan Thompson. *Asperger Syndrome and the Elementary School Experience: Practical Solutions for Academic and Social Difficulties.* Shawnee Mission, KA: AAPC, 2002. ISBN: 1-931282-13-7. Softcover, 6x9, 195 pp.

This text offers practical suggestions for day-to-day issues. Chapters cover: What is Asperger; Five Areas of Impairment, Organizational Accommodations, Accommodations in the Curriculum, Developing Social Skills, Team Work. <www.asperger.net>

Myles, Brenda Smith, and Diane Adreon. *Asperger Syndrome and Adolescence: Practical Solutions for School Success.* Shawnee Mission, KA: AAPC, 2001. ISBN: 0-9672514-9-4. Softcover, 6x9, 226 pp.

This text includes chapters that contrast school experiences for neurotypical Middle Years and high school students and those with Asperger and discuss assessment, interventions, and transition planning. <www.asperger.net>

Myles, Brenda Smith, and Jack Southwick. *Asperger Syndrome and Difficult Moments: Practical Solutions for Tantrums, Rage and Meltdowns.* Shawnee Mission, KA: AAPC, 1999. ISBN: 0-9672514-3-5. Softcover, 6x9, 106 pp.

There is some overlap in content with *Asperger Syndrome: A Guide for Educators and Parents*, but this text contains very useful chapters on the rage cycle and Functional Assessment of Behaviour in the cycle. <www.asperger.net>

Myles, Brenda Smith, Katherine Tapscott Cook, Nancy E. Miller, Louann Rinner, and Lisa A. Robins. *Asperger Syndrome and Sensory Issues: Practical Solutions for Making Sense of the World.* Shawnee Mission, KA: AAPC, 2000. ISBN: 0-9672514-7-8. Softcover, 6x9, 120 pp.

This text includes chapters that cover Sensory Processing, AS and Associated Sensory Characteristics, Assessing Sensory Processing Issues and Interventions for Sensory Issues, plus a case study and a highly usable trouble-shooting chart. <www.asperger.net>

Myles, Brenda Smith, and Richard L. Simpson. *Asperger Syndrome: A Guide for Educators and Parents.* Austin, TX: PRO-ED Inc., 1998. ISBN: 0-9672514-3-5. Softcover, 6x9, 140 pp.

This text provides a useful discussion of modifications in curriculum content and teaching style. Chapters cover Understanding Meaning and Nature of Asperger Syndrome, Assessing Students, Teaching Academic Content, Planning for Social and Behavioural Success and Planning for Life after School, and Impact on the Family, including case studies. <www.asperger.net>

Myles, Brenda Smith, Melissa L. Trautman, and Ronda L. Schelvan. *The Hidden Curriculum: Practical Solutions for Understanding Unstated Rules in Social Situations.* Shawnee Mission, KS: AAPC, 2004. Softcover, 6x8, 76 pp.

Life is full of subtle social rules and cues which most people learn automatically but which must be taught directly to people with social/cognitive deficits. This book offers a wealth of practical suggestions and curriculum items. <www.asperger.net>

Rodman, Karen E., ed. *Asperger's Syndrome and Adults…Is Anyone Listening?: Essays by Partners, Parents, and Family Members of Adults with Asperger's Syndrome.* London: Jessica Kingsley, 2003. ISBN 1-84310. Softcover, 5x8, 185 pp.

Compiled by Families of Adults Afflicted with Asperger's Syndrome (FAAAS Inc.), this text makes up a collection of positive and negative experiences of individuals who are close to those with AS. <www.faaas.org>

Schopler, Eric and Gary B. Mesibov, eds. *High-Functioning Individuals with Autism.* New York, NY: Plenum, 1992. Hardcover, 5x8, 316 pp.

This text contains sections that deal with diagnostic, educational, and social issues, as well as parental and first-person accounts.

Winner, Michelle Garcia. *Inside Out: What Makes a Person with Social Cognitive Deficits Tick.* Shawnee Mission, KA: AAPC, 2000. ISBN: 0-970132-0-X. Softcover, spiral-bound, 201 pp.

This text for professionals functions as a workbook for students with Asperger Syndrome, High Functioning Autism, Non-Verbal Learning Disability, or Pervasive Developmental Disorder—Not Otherwise Specified. <www.asperger.net> or <www.socialthinking.com>

– – –. *Thinking about You, Thinking about Me: Philosophy and Strategies to Further Develop Perspective Taking and Communicative Abilities for Persons with Social-Cognitive Deficits.* Shawnee Mission, KA: AAPC, 2000. ISBN: 0-9701320-1-8. Softcover, 8x11, 207 pp.

A companion to *Inside Out*, this text serves as a hands-on workbook for professionals working individually or with groups on social-cognitive skills such as thinking out loud, perspective-taking, and social mapping. It contains a good bibliography and suggested activity resources. <www.asperger.net> or <www.socialthinking.com>

Autobiographies/ Biographies (see also Explaining ASD)

Barnhill, G. *Right Address Wrong Planet: Children with Asperger Syndrome Becoming Adults*. Shawnee Mission, KA: AAPC, 2002. ISBN: 1-931282-02-1. Softcover, 6x9, 214 pp. plus a resource list.

In the mid-1990s school psychologist Barnhill, taking doctoral coursework in Autism and the newly-recognized area of Asperger Syndrome, recognized the learning and behavioural difficulties experienced by her 21-year-old son Brent. This first-person account describes Brent's childhood, adolescence, and adulthood from the perspectives of his parents, friends, and family, and of Brent himself. <www.asperger.net>

Barron, Judy, and Sean Barron. *There's a Boy in There: Emerging from the Bonds of Autism*. Arlington, TX: Future Horizons, 1994. ISBN: 1-88-5477-86-4. Softcover, 5x8, 264 pp.

This text contains parallel reflections from the mother of a boy with Autism and the boy himself, who is now a well-functioning adult, about his very difficult growing-up process within a family. <www.exceptionalresources.com>

Cutler, Eustacia. *A Thorn in My Pocket: Temple Grandin's Mother Tells the Family Story*. Arlington, TX: Future Horizons, 2004. ISBN: 1-932565-16-7. Hardcover, 9x10, 228 pp.

Temple Grandin's mother relates the story of her daughter's birth and diagnosis in the 1950s, and Temple's growth to adulthood as a designer of animal handling equipment and an advocate for persons with ASD.

Grandin, Temple. *Thinking in Pictures and Other Reports from My Life with Autism*. New York, NY: Vintage, 1996. ISBN: 067977289.

Grandin is a woman with ASD as well as the holder of a Ph.D, and is one of the world's foremost experts in the design and construction of livestock handling facilities. These texts describe her childhood and young adulthood, and discovery of ways to understand her own ways of thinking and managing anxiety, and the process of channelling her particular gifts into a career.

Grandin, Temple, and Catherine Johnson. *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behavior*. New York, NY: Scribners, 2005. ISBN: 0-7432-4769-8. Hardcover, 6x8, 342 pp.

Grandin discusses the application of her theories on Autism to understanding animal behaviour.

Grandin, Temple, and Margaret M. Scariano. *Emergence: Labeled Autistic*. Novato, CA: Arena Press, 1986. ISBN: 0-87879-524-3. Softcover, 5x8, 184 pp.

Hart, Charles. *Without Reason: A Family Copes with Two Generations of Autism.* New York, NY: Signet, 1989. ISBN: 0-451-16940-9. Paperback, 267 pp.

Hart writes: "For the first thirty years of my life I lived with family members disabled by autism without understanding their disability or even knowing that others had a name for this baffling condition that had affected my brother and my oldest son."

Schopler, Eric, and Gary B. Mesibov, eds. *High Functioning Individuals with Autism.* New York, NY: Plenum, 1992. Hardcover, 5x8, 316 pp.

This text contains sections that deal with diagnostic, educational, and social issues, as well as parental and first-person accounts.

Shore, Stephen. *Beyond the Wall: Personal Experiences with Autism and Asperger Syndrome.* Shawnee Mission, KA: AAPC, 2003. ISBN: 1-931282-19-6. Softcover, 6x9, 214 pp.

Shore is completing a doctoral degree in special education. He offers an explanation of his own growing-up experiences and advice for others with high-functioning autism or AS.

Willey, Liane Holliday. *Asperger Syndrome in the Family: Redefining Normal.* London: Jessica P. Kingsley, 1999. ISBN: 1-85302-873-8. Softcover, 6x9, 172 pp.

Willey is a doctor of education, a researcher, a person with AS, the parent of an AS daughter and, she believes, the daughter of a father with AS. This text is a companion to *Pretending to Be Normal* (below). <www.aspie.com> or <www.jkp.com>

– – –. *Pretending To Be Normal: Living with Asperger's Syndrome.* London: Jessica P. Kingsley, 1999. ISBN: 1-85302-949-9. Softcover, 6x9, 170 pp.

A first-person story that contains many suggestions for persons with AS and their families. <www.aspie.com> or <www.jkp.com>

Williams, Donna. *Nobody Nowhere.* Toronto, ON: Doubleday, 1992. ISBN: 0-385-25372-9. Hardcover, 6x9, 219 pp.

An autobiography of a woman with ASD who was not diagnosed until she was in her early 20's; Williams wrote it to help put the disconnected pieces of her life together and to better understand herself.

– – –. *Somebody Somewhere.* Toronto, ON: Doubleday, 1994. ISBN: 0-385-25447-4. Hardcover, 6x9, 238 pp.

A follow-up to *Nobody Nowhere*, this text describes the four years following Williams' diagnosis.

Communication

Beukelman, David R., and Pat Mirenda. *Augmentative and Alternative Communication: Management of Severe Communication Disorders in Children and Adults.* Baltimore, MD: Paul H. Brookes, 1992.

Focus on Autism and Other Developmental Disabilities 16.3 (Summer, 2001). Special Issue (untitled).

Freeman, Sabrina, and Lorelie Dake. *Teach Me Language: A Language Manual for Children with Autism, Asperger's Syndrome and Related Developmental Disorders.* Langley, BC: SKF Books, 1996. ISBN: 0-9657565-0-5. Hardcover, spiral-bound, 8x11, 410 pp.

This workbook is designed for individual or small group therapeutic use by clinicians, other personnel or parents; it task-analyzes into exercises and activities many aspects of social language, general knowledge, grammar and syntax, advanced language development, and language-based academic concepts. Also available is a companion book of forms. ISBN: 0-9657565-1-3. <www.skfbooks.com>

Hamersky, Jean. *Cartoon Cut-Ups: Teaching Figurative Language and Humor.* Shawnee Mission, KA: AAPC, 1995.

Written for children 8 years old and up who have difficulty using figurative language and humour, this text contains eight units which focus on specific elements of humour. <www.asperger.net>

Manolson, Ayala. *It Takes Two to Talk: A Parent's Guide to Helping Children Communicate.* Toronto, ON: The Hanen Centre, 1992. ISBN: 0-921145-02-0. Softcover, 8x11, 151 pp.

This text is similar to Fern Sussman's *More Than Words*, but is intended for more general communication difficulties. It is written in clear language with good graphics. <www.hanen.org>

Ruiter, Irma D. *Allow Me: A Guide to Promoting Communication Skills in Adults with Developmental Delays.* Toronto, ON: The Hanen Centre, 2000. ISBN: 0-921145-15-2. Softcover, 8x11, 140 pages.

This text contains strategies for ideas and activities applicable to older and/or more able students. <www.hanen.org>

Sussman, Fern. *More Than Words: Helping Parents Promote Communication and Social Skills in Children with Autism Spectrum Disorder.* Toronto, ON: The Hanen Centre, 1999. Softcover, 8x11, 424 pp.

Designed for use with young children or children with minimal communication and social communication skills, this text describes stages of developing communication skills and is full of ideas and suggestions and coloured illustrations. Video also available. <www.hanen.org>

Watson Linda R., Catherine Lord, Bruce Schaffer, and Eric Schopler. *Teaching Spontaneous Communication to Autistic and Developmentally Handicapped Children.* Austin, TX: Pro-Ed, 1989.

This text describes the widely-used curriculum developed by TEACCH (Division for the Treatment and Education of Autistic and related Communication handicapped CHildren, Department of Psychiatry, University of North Carolina, Chapel Hill.) Included are instructions for assessing, identifying goals and objectives, and structuring activities.

Wilson, Carolyn C. *Room 14: A Social Language Program, Activities Book.* East Moline, IL: LinguiSystems, 1993. ISBN 1-55999-862-8. Softcover, spiral-bound, 8x11, 113 pp.

This activity book contains reproducible forms and activity suggestions for teaching social communication skills such as introducing yourself, asking questions, and complaining, for children developmentally 6-10 years.

– – –. *Room 14: A Social Language Program, Instructors Manual.* East Moline, IL: LinguiSystems, 1993. ISBN 1-55999-862-8. Softcover, spiral-bound, 8x11, 197 pp.

This text accompanies the above activity book.

Early Development (see also Parenting, Social Relationships)

Beyer, Jannik, and Lone Gammeltoft. *Autism and Play.* London: Jessica P. Kingsley, 1998. ISBN: 1-85302-845-2. Softcover, 6x9, 112 pp.

Chapters discuss Autism and early development, and characteristics and patterns of play and give many examples of play sequences and a questionnaire for play observation. <www.asperger.net>

Greenspan, Stanley I., and Serena Wieder. *The Child with Special Needs: Encouraging Intellectual and Emotional Growth.* Cambridge, MA: Perseus Books, 1998. ISBN: 0-201-40726-4. Hardcover, 6x9, 498 pp.

Greenspan and Wieder provide a comprehensive, step-by-step approach called Floor-Time to understand the nature of developmental problems in children and individualized techniques to help children reach their potential.

Gutstein, Steven. *Autism Asperger: Solving the Relationship Puzzle.* London: Jessica P. Kingsley, 2000. ISBN: 1-885477-70-8. Softcover, 8x11, 186 pp.

In his forward, Gutstein writes: "The greatest tragedy of the disorder of Autism is that it robs children of thousands of hours of joy, wonder and creative excitement that relationships provide the rest of us." He describes this text as a "new developmental program that opens the door to lifelong social and emotional growth." The text outlines Gutstein's approach and Relationship Development Intervention, and discusses ways to help children with ASD move beyond memorizing social scripts and rote behavioural responses, and to develop the ability to participate in and to enjoy the "relational dance." There are two accompanying how-to manuals (see below and under **Social Relationships**). <www.connectionscenter.org>

Gutstein, Steven, and Rachelle Sheely. *Relationship Development Intervention with Young Children: Social and Emotional Development Activities for Asperger Syndrome, Autism, Pervasive Developmental Disorder, and Nonverbal Learning Disability.* London: Jessica P. Kingsley, 2001. ISBN: 1-84310-714-7. Softcover, 8x11, 250 pp.

This "how-to" manual is full of examples of goals and activities that are highly usable in home, early intervention, or school settings. Also see manual for children, adolescents, and adults listed under **Social Relationships**. <www.connectionscenter.org>

Hannah, Liz. *Teaching Young Children with Autistic Spectrum Disorders to Learn.* London: National Autistic Society, 2001. ISBN: 1-931282-09-9. Softcover, 8x11, 115 pp.

Part of a series, this text focuses on the pre-school and school setting and is useful for parents and professionals. <www.asperger.net>

Harris, Sandra L., and Mary Jane Weiss. *Right From the Start: Behavioural Intervention for Young Children with Autism.* Bethesda, MD: Woodbine House, 1998. ISBN: 1-890627-02x. Softcover, 5x8, 138 pp.

This text describes behavioural principles of intervention.

Leicestershire County Council, and Fosse Health Trust. *Autism: How to Help Your Young Child.* London: National Autistic Society, 1998. ISBN: 1-899280-65-0. Softcover, 8x11, 55 pp.

Part of a series, this text is useful for parents and professionals. Chapters cover Social Interaction, Communication and the Need for Sameness, with practical examples of typical problems and suggested solutions in each area. <www.asperger.net>

Schwartz, Sue, and Joan E. Heller Miller. *The New Language of Toys: Teaching Communication Skills to Children with Special Needs.* Bethesda, MD: Woodbine House, 1996. ISBN: 0933149735. Softcover, 7x10, 288 pp.

This easy-to-use guide for parents and teachers of children from birth to 6 years suggests ways to use homemade and familiar commercial toys to stimulate development. <www.woodbinehouse.com>

Whitaker, Philip. *Challenging Behaviour and Autism: Making Sense-Making Progress.* London: National Autistic Society, 2001. ISBN: 1-931282-07-2. Softcover, 8x11, 125 pp.

Part of a series, this text is useful for parents and professionals. Its main aims are: putting the emphasis on prevention; helping make sense of challenging behaviour; offering examples of helpful solutions; providing a framework for solving problems. An alphabetical "Index of Problems" is included. <www.asperger.net>

Education (see also Asperger's Syndrome, Early Development, Parenting)

Garrity, Carla, Kathryn Jens, William Porter, Nancy Sager, and Cam Short-Camilli. *Bully-Proofing Your School.* Longmont, CO: Sopris West, 1998.

Giangreco, Michael F., Chigee Cloniger, and Virginia Salce Iverson. *COACH 2: Choosing Outcomes and Accommodations for Children: A Guide to Educational Planning for Students with Disabilities.* Baltimore, MD: Paul H. Brookes, 1998. Softcover, 8x11, spiral-bound, 375 pp.

This is a comprehensive, field-tested support manual to assist school teams with tasks such as identifying family priorities and additional learning outcomes and supports needed, managing logistics of IEP construction, scheduling, and adapting lesson plans and evaluation.

Gilroy, Pamela J. *Kids in Motion: An Early Childhood Movement Education Program.* San Antonio, TX: Communication Skill Builders, 1985. ISBN: 0-88450-923-0. Softcover, 8x11, 70 pp.

---. *Kids in Motion: Developing Body Awareness in Young Children.* San Antonio, TX: Communication Skill Builders, 1986. ISBN: 0-88450-960-5. Softcover, 8x11, 75 pp.

---. *Discovery in Motion: Movement Exploration for Problem-Solving and Self-Concept.* San Antonio, TX: Communication Skill Builders, 1989. ISBN: 0-88450-373-9. Softcover, 8x11, 125 pp.

This three-book set provides objectives and activities requiring few specialized materials. <www.psychcorp.com>

Janzen, Janice E. *Understanding the Nature of Autism: A Guide to the Autism Spectrum Disorders.* 2nd ed. San Antonio, TX: Therapy Skill Builders, 2003. ISBN: 076164126-2.

This text is comprehensive on every aspect of Autism Spectrum Disorder, with many useful reproducible forms.

Kluth, Paula. *You're Going to Love this Kid: Teaching Students with Autism in the Inclusive Classroom.* Baltimore, MD: Paul H. Brookes, 2003. ISBN: 1-55766-614-8. Softcover, 8x10, 286 pp.

This would be useful for resource teachers or administrators who need to understand students with Autism and Asperger's Syndrome from the inside out, to explain their perspectives to others and to support them in inclusive classrooms.

Koegel, Robert L., and Lynn Kern Koegel, eds. *Teaching Children with Autism: Strategies for Initiating Positive Interactions and Improving Learning Opportunities.* Baltimore, MD: Paul H. Brookes, 1995. ISBN: 1-55766-180-4. Softcover, 6x9, 260 pp.

This texts contains chapters from different authors on typical difficulties with ASD and strategies for teaching and managing. <www.brookespublishing.com>

McClanahan, Lynn E., and Patricia J. Krantz. *Activity Schedules for Children with Autism.* Bethesda, MD: Woodbine House, 1999. ISBN: 0-933149-93 Softcover, 5x8, 116 pp.

This short text contains step-by-step instructions for introducing, evaluating, and expanding the use of visual schedules for activities, choice-making, and social interaction. <www.woodbinehouse.com>

Mulstay-Muratore, Linda. *Autism and PDD: Abstract Concepts, Level 1.* East Moline, IL: LinguiSystems, 2002. ISBN: 0-7606-0458-2 Softcover, 8x11, 190 pp. .

– – –. *Autism and PDD: Abstract Concepts, Level 2.* East Moline, IL: LinguiSystems, 2002. ISBN: 0-7606-0459-2. Softcover, 8x11, 196 pp.

These texts are designed for ages 3-5 (Level 1) and ages 5-9 (Level 2) but would be useful also for older children with language and cognitive weaknesses. They include useful line-drawing representations of concepts such as "what happened," "why/because," "what should," and "what if."

National Research Council. *Educating Children with Autism.* Washington, DC: National Academy Press, 2001. ISBN: 0-309-07269-7. Hardcover, 6x8, 307 pp.

This study, undertaken at the request of the US Department of Education's Office of Special Education Programs, reports scientific evidence on the effectiveness of early educational intervention on young children with ASD. Sections cover: Goals for Children with Autism and Their Families; Characteristics of Effective Interventions; and Policy, Legal and Research Contexts. This is a comprehensive summary of research, rather than a how-to book.

Powell, Stuart, and Rita Jordan. *Autism and Learning: A Guide to Good Practice.* London: David Fulton, 1997. ISBN: 1-85346-421-X. Softcover, 6x9, 170 pp.

This text is written for a British audience, but oriented to school/curriculum issues. <www.fultonbooks.co.uk>

Quill, Kathleen Ann. *Do-Watch-Listen-Say: Social and Communication Intervention for Children with Autism.* Baltimore, MD: Paul H. Brookes, 2000. ISBN: 1-55766-453-6. Softcover, 8x11, 430 pp.

This comprehensive and easy-to-use manual combines behavioural and developmental approaches to building social and communications skills for children with Autism (rather than high-functioning children or those with Asperger's Syndrome). It can be used at home or in the classroom and contains an assessment instrument and a wealth of activity suggestions to address communication and socialization objectives.

– – –. *Teaching Chiudren with Autism.* Scarborough, ON: Delmar, 1995. ISBN: 0-8273-6269-2. Softcover, 6x9, 315 pp.

This text contains twelve chapters including Perspectives, Communication Enhancement and Promoting Socialization, and others. <www.delmar.com/delmar.html>

Schopler, Eric, Robert J., Reichler, Ann Bashford, Margaret Lansing, and Lee M. Marcus. *Psychoeducational Profile Revised (PEP-R) Individualized Assessment and Training for Autistic and Developmentally Disabled Children. Vol. 1.* Austin, TX: PRO-ED Inc., 1990. ISBN: 0-89079-238-0.

Schopler, Eric, Robert J. Reichler, and Margaret Lansing. *Psychoeducational Profile: Teaching Strategies for Parents and Professionals. Vol. 2.* Austin, TX: PRO-ED Inc., 1980. ISBN: 0-89079-138-4.

Schopler, Eric, Margaret Lansing, and Leslie Waters. *Psychoeducational Profile: Teaching Activities for Autistic Children. Vol. 3.* Austin, TX: PRO-ED Inc., 1982. ISBN: 0839118007.

This text is part of the series *Individualized Assessment and Treatment for Autistic and Developmentally Disabled Children.* It contains the theoretical and application guidelines of TEACCH.

Sewell, Karen. *Breakthroughs: How to Reach Students with Autism.* Verona, WI: Attainment Company, 1998. ISBN: 1-57861-060-5. Softcover, spiral-bound, 8x11, 243 pp.

An overview that assists educators in establishing a self-contained classroom, this text contains extensive lesson plans for a range of objectives in early childhood and elementary domains.

Twachtman-Cullen, Diane. *How to be a Para Pro.* Higganum, CT: Starfish Specialty Press, 2000. ISBN: 0-9666529-1-6. Softcover, 8x11, 200 pp.

This easy-to-read text is divided into two parts. Autism Spectrum Disorders "101": A Short Course for People in the Trenches, gives a basic overview of the major features of ASD and ways to understand the individual student; the second part discusses the art and science of working as a paraprofessional in schools. <www.starfishpress.com>

Twachtman-Cullen, Diane, and Jennifer Twachtman-Reilly. *How Well Does Your IEP Measure Up?: Quality Indicators for Effective Service Delivery.* Higganum, CT: Starfish Specialty Press, 2002. ISBN: 0-9666529-2-4. Softcover, 250 pp.

This text discusses issues regarding the "how" of structuring an IEP and includes templates for some of the "what" regarding the content of an IEP for a child with ASD.

Wagner, Sheila. *Inclusive Programming for Elementary Students with Autism.* Arlington, TX: Future Horizons, 1999. ISBN: 1-885477-54-6. Softcover, 8x11, 225 pp.

– – –. *Inclusive Programming for Middle School Students with Autism/Asperger's Syndrome.* Arlington, TX: Future Horizons, 2002. ISBN: 1-885477-84-8. Softcover, 8x11, about 225 pp.

Both texts provide a good overview of challenges and strategies for meeting the needs of children with ASD in regular school and regular classroom settings.

Explaining ASD
(see also **Asperger's Syndrome**)

Band, Eve B., and Emily Hecht. *Autism through a Sister's Eyes: A Young Girl's View of Her Brother's Autism.* Arlington, TX: Future Horizons, 2001. Softcover, 5x8, 67 pp.

Subtitled "A Book for Children about High-Functioning Autism and Related Disorders," this text is appropriate for Middle School children, adolescents, and sibling groups.

Bishop, Beverly. *My Friend with Autism.* Arlington, TX: Future Horizons, 2003. ISBN: 1-885477-89-9. Softcover, 8x11, 30 pp.

Written for young children in colouring book format, each page has a large black and white illustration of a particular feature of Autism as it affects the "friend" in the book.

Bleach, Fiona. *Everybody is Different: A Book for Young People Who Have Brothers and Sisters with Autism.* London: National Autistic Society, 2001. ISBN: 1-931282-06-4. Softcover, 5x7, 79 pp.

This text provides information on ASD and covers typical concerns in Q&A format (e.g., "Why does my brother or sister…?"). It ends with a section that identifies some of the feelings and frustrations common to siblings and is appropriate for elementary and older children. <www.asperger.net>

Dalrymple, Nancy. *Learning Together.* Bloomington, IN: Indiana Resource Center for Autism, 1979. Softcover, 5x8, 28 pp.

Written for young to Middle Years children, this text explains Autism from the first-person perspective of a child talking to other children.

Davies, Julie. *Children with Autism: A Booklet for Brothers and Sisters.* Nottigham, UK: The Early Years Diagnostic Centre, 1994. Softcover, 8x8, 24 pp.

This small booklet is written to answer common questions of siblings of children with ASD and would be useful for Middle Years children and older.

Espin, Roz. (2003) *Amazingly…Alphie!* Shawnee Mission, KS: AAPC, 2003. Softcover, 8x10, 46 pp.

The author writes: "This is a story about differences. It's about trying to understand people's different ways of being…". The story is told from the first person perspective of a "maladaptive" computer who is wired differently and whose life is brightened with the appearance of a differently wired computer technician. This would be useful for elementary years and up. <www.asperger.net>

Faherty, Catherine. *What Does It Mean to Me?: A Workbook Explaining Self-Awareness and Life Lessons to the Child or Youth with High Functioning Autism or Aspergers.* Arlington, TX: Future Horizons, 2000. ISBN: 1-885477-25-2. Hardcover, coil-bound, 8x11, 300 pp.

This is an excellent resource with many forms and activities useful for individuals or groups.

Gagnon, Elisa, and Brenda Smith Myles. *This is Asperger Syndrome.* Shawnee Mission, KA: AAPC, 1999. ISBN: 0-9672514-1-9. Softcover, 8x11, 27 pp.

This text is written from the perspective of the AS child with large black and white illustrations and short descriptions of typical difficulties. It is suitable for children/adolescents. <www.asperger.net>

Gray, Carol. *The Sixth Sense II.* Arlington, TX: Future Horizons, 2002. ISBN: 1-885477-90-2. Softcover, 8x11, 23 pp.

An expansion of the original "Sixth Sense" included in Gray's *Taming the Recess Jungle*, this text is a valuable addition to the literature on "how to explain to classmates" and "how to help classmates support a child with ASD," despite its length.

Ives, Martine. *What Is Asperger Syndrome and How Will It Affect Me?* London: National Autistic Society, 2001. ISBN: 1-931282-05-6. Softcover, 6x9, 27 pp.

This small text provides a brief explanation of AS to children and adolescents who have AS, with simple black and white illustrations. <www.nas.org.uk> or <www.asperger.net>

Katz, Illana, and Edward Ritvo. *Joey and Sam.* Northridge, CA: Real Life Storybooks, 1993. ISBN: 1-882388-00-3. Hardcover, 8x11, 38 pp.

Written for young children with nice black and white illustrations, this book looks at similarities and differences between 6-year-old Joey and his 5-year-old autistic brother. <www.reallifestories.com>

Lears, Laurie. *Ian's Walk: A Story about Autism.* Morton Grove, IL: Albert Whitman and Co., 1998. ISBN: 0-8075-3480-3. Hardcover, 8x11, 28 pp.

Written for young to Middle Years children with large colour illustrations, this story explores a sister's feelings about having to be responsible for her young brother and then losing him at the park.

Messner, Abby Ward. *Captain Tommy.* Stratham, NH: Potential Unlimited Publishing, 1996. ISBN: 0-9650700-0-X. Hardcover, 8x11, 30 pp.

Written for young to Middle Years children with coloured illustrations, this text describes the experience of a boy trying to make friends with a child with Autism.

Murrell, Diane. *Tobin Learns to Make Friends.* Arlington, TX: Future Horizons, 2001.

Tobin the red engine, who shows many of the social skills deficit of children with ASD, learns to make friends and to cope with common situations such as crowding, interrupting, taking turns, and following rules.

Myles, Haley Morgan. *Practical Solutions to Everyday Challenges for Children with Asperger Syndrome*. Shawnee-Mission, KS: AAPC, 2002. ISBN: 1-931282-15-3. Softcover, spiral-bound, 34 pp.

This is a self-help book for more able children with ASD, told from a child's point of view, and would be useful for explaining or discussing the disorder. Brief problem-solving suggestions are offered on topics such as "if you receive a gift you don't care for" or "if you are stuck in an elevator." <www.asperger.net>

Peralta, Sarah. *All About My Brother.* Shawnee Mission, KA: AAPC, 2002. ISBN: 1-931282-11-0. Hardcover, 8x11, 27 pp.

Written from the perspective of an eight-year-old, this text uses primary-style illustrations and would be useful for young and Middle Years children.

Shapiera, Michelle. *Simon Says: A Book about PDD.* Minden, ON: Epic Press, 2000. ISBN: 1-55036-179-9. Softcover, 8x11, 30 pp.

Written from a first-person perspective with large illustrations, this text is suitable for elementary and Middle Years, and contains suggestions for inclusionary classroom activities. <www.simonsaysbook.com>

Schnurr, Rosina G. *Asperger's, Huh?: A Child's Perspective.* Gloucester, ON: Anisor Publishing, 1999. ISBN: 0-964473-0-9. Softcover, 9x9, 49 pp.

Written from the first-person perspective of a child with Asperger's Syndrome, this small text discusses topics such as Friends, Social Sillies, and Sports, using simple language, lots of white space, and helpful graphics.

Segar, Mark. *Coping: A Survival Guide for People with Asperger Syndrome.* Nottingham, UK: The Early Years Diagnostic Centre, 1997. Spiral-bound, 8x11, 44 pp.

This informally written text discusses many aspects of "coping" with social expectations and social problem-solving from the perspective of a university graduate in biochemistry with AS speaking to others with AS.

Simmons, Karen Leigh. *Little Rainman: Autism through the Eyes of a Child.* Arlington, TX: Future Horizons, 1996. ISBN: 1-885477-29-5. Softcover, 8x11, 71 pp.

This text is written with black and white illustrations from the first-person perspective of a child explaining his Autism/Asperger Syndrome to other people. It is useful for young and Middle Years children.

General

Cohen, Shirley. *Targeting Autism.* Berkeley, CA: University of California Press, 1998. ISBN: 0-520-21309-2. Softcover, 6x9, 215 pp.

A good general reference in readable language; the first two chapters quote extensively from firsthand accounts of Autism by parents and autistic individuals.

Frith, Uta. *Autism and Asperger Disorder.* London: Cambridge UP, 1991. ISBN: 0-521-38608-X. Softcover, 6x9, 246 pp.

This text contains eight chapters cover history, family studies, adulthood, thinking and problem-solving style particular to AS, and autobiographical writings.

Gilpin, R. Wayne, ed. *Laughing and Loving with Autism.* Future Education Inc, 1993. Softcover, 5x8, 125 pp.

This small collection of anecdotes by parents provides helpful insight into how a particular child with ASD sees the world.

Richard, Gail A. *The Source for Autism.* East Moline, IL: LinguiSystems, 1997. ISBN: 0-7606-0146-1. Softcover, coil-bound, 167 pp.

An easy-to-read, good general introduction. <www.linguisystems.com>

Sacks, Oliver. *An Anthropologist on Mars.* New York, NY: Random House, 1995. ISBN: 0-394-28151-9. Softcover, 5x8, 328 pp.

The author writes: "Here are seven narratives of nature—and the human spirit—as these have collided in unexpected ways. The people in this book have been visited by neurological conditions as diverse and Tourette's Syndrome, autism, amnesia and total colorblindness." The title chapter is devoted to Temple Grandin.

Siegel, Bryna. *The World of the Autistic Child: Understanding and Treating Autistic Spectrum Disorders.* London: Oxford UP, 1996. ISBN: 0-19-507667-2. Softcover, 6x9, 350 pp.

Part I covers "What It Means to Have Autism," including characteristics of the syndrome and family responses. Part II covers "Treatment Resources" for children and adolescents, and medications and non-mainstream treatments. <www.parentbookstore.com>

Parenting (see also **Early Development**)

Brill, Marlene Targ. 1994. *Keys to Parenting the Child with Autism.* 2nd ed. Hauppauge, NY: Barron's Educational Series, 2001. ISBN: 0-76411-292-9. Softcover, 5x8, 200 pp.

This text covers many questions common to parents, from diagnosis to education to adulthood.

Dickinson, Paul, and Liz Hannah. *It Can Get Better: Dealing with Common Behaviour Problems in Young Autistic Children.* London: National Autistic Society, 1998. Softcover, 5x8, 59 pp.

This small book is designed for parents and caregivers and provides many suggestions in areas such as tantrums, sleeping, eating, toileting, perseverations, and destructive behaviour. <www.asperger.net>

Greene, Ross W. *The Explosive Child.* 2nd ed. New York, NY: Harper Collins, 2001. ISBN: 0-06-093102-7. Softcover, 5x8, 336 pp.

The author writes: "This book is about helping inflexible, easily frustrated, explosive children and their parents think and interact more adaptively." It is equally useful for school professionals and other caregivers.

Harris, Sandra L. *Siblings of Children with Autism: A Guide for Families.* Bethesda, MD: Woodbine, 1994.

Hart, Charles A. *A Parent's Guide to Autism.* New York, NY: Pocket Books, 1993. ISBN: 0-671-75099-2. Softcover, 5x8, 244 pp.

Written by a father and a brother of persons with Autism, this text covers many questions common to parents, from diagnosis to education to adulthood.

Legge, Brenda. *Can't Eat, Won't Eat: Dietary Difficulties and Autistic Spectrum Disorders.* London: Jessica P. Kingsley, 2002. ISBN: 1-85502-974-2. Softcover, 6x9, 208 pp.

Written by the mother of a child with Asperger's Syndrome, this text provides tips gained through experience and many case studies contributed by parents. <www.asperger.net>

Powell, Thomas H., and Peggy Ahrenhold Gallagher. *Brothers and Sisters: A Special Part of Exceptional Families.* 2nd ed. Baltimore, MD: Paul H. Brookes, 1993. Softcover, 6x9, 290 pp.

Written for families with many kinds of exceptional children, this text contains many strategies suggested by parents and siblings. <www.brookespublishsingco.com>

Powers, Michael D., and Janet Poland. *Asperger Syndrome and Your Child: A Parent's Guide.* New York, NY: Harper Collins, 2003. ISBN: 0-060093488-3. Softcover, 5x8, 302 pp.

The first author writes: "As much as this book is about Asperger Syndrome, it is about living with Asperger Syndrome." This is a clearly written support manual for parents of children from early childhood through adolescence.

Powers, Michael D., ed. *Children with Autism: A Parents' Guide.* Bethesda, MD: Woodbine House, 1989. ISBN: 0-933149-16-6.

This text covers many questions common to parents, from diagnosis to education to adulthood. <www.woodbinehouse.com>

Randall, Peter, and Jonathan Parker. *Supporting the Families of Children with Autism.* Toronto, ON: John Wiley and Sons, 1999.

Sheridan, Susan M. *Why Don't They Like Me?: Helping Your Child Make and Keep Friends.* Longmont, CO: Sopris West, 1998. ISBN: 1-57035-124-4. Softcover, 6x9, 172 pp.

Intended for use by parents and written clearly, this text outlines steps to identify missing "getting along" skills in all children and how to help children to practise and learn them. <www.sopriswest.com>

Staub, Debbie. *Delicate Threads: Friendships between Children with and without Special Needs in Inclusive Settings.* Bethesda, MD: Woodbine House, 1998. ISBN: 0-933149-90-5. Softcover, 6x9, 243 pp.

Written for parents and professionals, this text provides case studies of many friendships between actual children and gives suggestions for supporting friendships in schools, homes, and communities. <www.woodbinehouse.com>

Stengle, Linda J. *Laying Community Foundations for Your Child with a Disability: How to Establish Relationships That Will Support Your Child after You've Gone.* Bethesda, MD: Woodbine House, 1996. ISBN: 0-933149-67-0. Softcover, 6x9, 216 pp.

This text is full of real-life examples of how various parents with different kinds of children have approached the "human side of estate planning." Charts and checklists are provided to help parents assess their child's needs and interests, and suggest many avenues for developing community relationships. <www.woodbinehouse.com>

Szatmari, Peter. *A Mind Apart: Understanding Children with Autism and Asperger Syndrome.* New York, NY: Guilford Press, 2004. ISBN: 1-57230-544-4.

Dr. Szatmari has written this book, using a series of descriptive case studies, to assist parents and other caregivers to understand how their children with ASD perceive and interpret the world.

Related Disabilities

Dornbush, Marilyn P., and Sheryl K. Pruitt. *Teaching the Tiger: A Handbook for Individuals Involved with the Education of Students with Attention Deficit Disorders, Tourette Syndrome or Obsessive Compulsive Disorders.* Duart, CA: Hope Press, 1995. ISBN: 1-878267-34-5. Softcover, spiral-bound, 8x11, 268 pp.

This classroom-oriented text contains many practical suggestions in point-form layout. <www.hopepress.com>

Levine, Mel. *All Kinds of Minds: A Young Student's Book about Learning Disabilities.* Cambridge, MA: Educators Publishing Service, 1993. ISBN: 0-8388-2090-5. Hardcover, 6x9, 200 pp.

Case studies, written for Middle Years children, explain various kinds of learning disabilities and suggest compensatory and remedial strategies children can use themselves. <www.allkindsofminds.org>

– – –. *A Mind at a Time.* New York, NY: Simon and Schuster, 2002. ISBN: 0-7432-0223-6. Softcover, 5x8, 342 pp.

There is some overlap with Educational Care (below). Thirteen chapters address components of learning including Attention Control, Memory, Language, Spatial and Sequential Ordering Systems, Higher Thinking Systems, and Social Thinking Systems. <www.allkindsofminds.org>

– – –. *Educational Care: A System for Understanding and Helping Children with Learning Problems at Home and In School.* Cambridge, MA: Educators Publishing Service, 1994. ISBN: 0-8388-1987-7. Hardcover, 9x10, 323 pp.

Written for educators and other professionals, this text provides suggestions for assessment, understanding, and remediation in areas of learning such as Attention Control, Memory, Chronic Misunderstanding, Deficient Output, Delayed Skill Acquisition, and Poor Adaptation. <www.allkindsofminds.org>

– – –. *Keeping Ahead in School: A Student's Book about Learning Abilities and Learning Disorders.* Cambridge, MA: Educators Publishing Service, 1990. ISBN: 0-8388-2069-7. Hardcover, 6x9, 200 pp.

Written for children, adolescents, and parents, this text explains various aspects of brain function and how learning is affected. This book and *All Kinds of Minds* would be useful for a professional doing groups with children. <www.allkindsofminds.org>

Tanguay, Patricia. *Non Verbal Learning Abilities: Educating Students with Non-Verbal Learning Disabilities, Asperger Syndrome and Related Disabilities.* London: Jessica P. Kingsley, 2002. ISBN: 1-85302-941-6. Softcover, 9x10, 285 pp.

This text provides a useful discussion of the similarities and differences in learning profiles among children with different but related disabilities, with suggested strategies. <www.jkp.com>

Self-Management/ Human Sexuality

Champagne, Marklyn P., and Leslie Walker-Hirsch. *Circles I: Intimacy and Relationships.* Program 1 in the CIRCLES series. Santa Barbara, CA: James Stanfield Publishing Company, 1988.

A comprehensive video-based curriculum to teach students with special educational needs social/sexual concepts and rules of intimacy. <www.stanfield.com>

Fegan, Lydia, Anne Rauch, and Wendy McCarthy. *Sexuality and People with Intellectual Disability.* Baltimore, MD: Paul H. Brookes, 1993. ISBN: 1-55766-140-5. Softcover, 5x8, 131 pp.

Although not specific to ASD, this text offers many practical suggestions.

Gray, Susan, Lisa Ruble, and Nancy Dalrymple. *Autism and Sexuality: A Guide for Instruction.* Bloomington, IN: Autism Society of Indiana, 2000. Softcover, 5x8, 27 pp.

This small pamphlet briefly discusses issues such as Developing an Individualized Curriculum, Prevention of Sexual Abuse, and Establishing a Menstrual Routine, and has references to more detailed resources. Available from Autism Society Manitoba.

Hingsburger, Dave. *Openers: Parents Ask Questions about Sexuality and Children with Developmental Disabilities.* Vancouver, BC: Family Support Institute, 1993. Softcover, 5x8, 88 pp.

This short book contains information and advice in Q&A format from an author who has written widely on this subject.

Mack, Alison. *Toilet Learning: The Picture Book Technique for Children and Adults.* Boston, MA: Little, Brown and Company, 1978. ISBN: 0-316-54237-7. Softcover, 6x9, 109 pp.

The first half of this clearly written book walks parents or caregivers through every step of the process; the second half is a story book with colour illustrations for children.

Newport, Jerry, and Mary Newport. *Autism – Asperger's and Sexuality: Puberty and Beyond.* Arlington, TX: Future Horizons. ISBN: 1-885477-88-0. Softcover, 5x8, 168 pp. plus addendum.

The authors both have Asperger's Syndrome and have written this guide to dating, relationships, and sexuality as if they were having a conversation with other AS adolescents or adults. This would be useful for parents/caregivers or as part of a family life curriculum in a school or counselling setting.

Talarico, Ron, and Francella H. Slusher. *Taxonomy of Behavioral Objectives for Habilitation of Mentally Handicapped Persons.* Portland, OR: Portland Habilitation Center, Inc, 1984. Hardcover, 8x11, 515 pp.

This text provides an exhaustive task analysis of nearly all possible skills in the areas of Adaptive Skills, Basic Housekeeping and Safety, Health, and Sensory-Motor, and would be most useful for teachers or others working with children with significant levels of handicap and/or in life skills activities or settings. <www.phc.com>

Wheeler, Maria. *Toilet-Training for Individuals with Autism and Related Disabilities: A Comprehensive Guide for Parents and Teachers.* Arlington, TX: Future Horizons, 1998. ISBN: 188-5477-457. Softcover, 8x11, 122 pp.

This text deals with every stage of toilet training, beginning with assessing for readiness.

Wrobel, Mary. *Taking Care of Myself: A Hygiene, Puberty and Personal Curriculum for Young People with Autism.* Arlington, TX: Future Horizons, 2003. ISBN: 1-885477-94-5. Softcover, 8x11, 245 pp.

This ready-to-use curriculum guide includes a collection of social story examples of dozens of typical self-care and sexuality issues.

Sensory/Self-Regulation

Buron, Kari Dunn. *When My Autism Gets Too Big: A Relaxation Book for Children with Autism Spectrum Disorders.* Shawnee Mission, KA: AAPC, 2004. ISBN: 1-931282-51x. Softcover, 8x11, 38 pp.

This workbook would be very useful for early to Middle Years students who need assistance with visualizing and planning self-regulation strategies and activities.

Buron, Kari Dunn, and Mitzi Curtis. *The Incredible Five-Point Scale: Assisting Students with Autism Spectrum Disorders in Understanding Social Interactions and Controlling Their Emotional Responses.* Shawnee Mission, KA: AAPC, 2004. ISBN: 1-931282-52-8. Softcover, 8x11, 78 pp.

This workbook is written by two Autism specialists, one a parent of a child with ASD, and uses a variety of scales to help children rate feelings of anger or pain, helping children to "talk in numbers" rather than in socially- or emotionally-laden words.

Cautela, Joseph R., and June Groden. *Relaxation: A Comprehensive Manual for Adults, Children, and Children with Special Needs.* Champaign, IL: Research Press, 1978. ISBN: 0-87822-186-7. Softcover, 8x11, spiral-bound, 92 pp.

Much of this manual is devoted to procedures for helping children to learn postural and breathing techniques to promote relaxation. <www.researchpress.com/>

Haldy, Mary, and Laurel Haack. *Making It Easy: Sensorimotor Activities at Home and School.* San Antonio, TX: Therapy Skill Builders, 1995. ISBN: 0761743494. Softcover, spiral-bound, 8x11, 174 pp.

This manual is full of ideas and activities for identifying sensorimotor disorders and adapting home and classroom environments, and contains good reproducible forms and checklists.

Hong, Chia Swee, Helen Gabriel, and Cathy St. John. *Sensory Motor Activities for Early Development.* Oxon, UK: Winslow Press, 1996. ISBN: 0-86388-153-X. Softcover, spiral-bound, 8x11, 93 pp.

This manual presents many ideas for activities to be used by parents with very young children, and is equally applicable for school settings.

Kranowitz, Carol Stock. *The Out-of-Sync Child: Recognizing and Coping with Sensory Integration. Dysfunction.* New York, NY: Berkley, 1998. ISBN: 0-399-52386-3.

– – –. *The Out-of-Sync Child Has Fun: Activities for Kids with Sensory Integration Dysfunction.* New York, NY: Berkley, 2003. ISBN: 0-399-52843-1. Softcover, 6x9, 323 pp.

These two texts are intended for teachers and parents whose children show significant over- or under-sensitivity to sensory stimulation.

Rief, Sandra F. *How to Reach and Teach ADD/ADHD Children.* West Nyack, NY: Center for Applied Research in Education, 1993. ISBN: 0-87628-413-6. Softcover, 8x11, 239 pp.

This manual is clearly written with many specific suggestions for getting and keeping attention, teaching organizational skills, and subject instruction; it also contains two good chapters on guided imagery and visualization.

Williams, Mary Sue, and Sherry Shellenberger. *How Does Your Engine Run?: A Leader's Guide to The Alert Program™ for Self-Regulation.* Albuquerque, NM: TherapyWorks, 1996. Softcover, coil-bound, 8x11.

This manual describes the theory behind the Alert Program™ and step-by-step suggestions to implement it, and contains many reproducible forms and charts.

– – –. *Take Five! Staying Alert at Home and School.* Albuquerque, NM: TherapyWorks, 2001. Softcover, spiral-bound, 86 pp.

This text provides many activities to help children regulate arousal levels. <www.AlertProgram.com>

Yack, Ellen, Shirley Sutton, and Paula Acquilla. *Building Bridges through Sensory Integration: Occupational Therapy for Children with Autism and Other Pervasive Developmental Disorders.* Weston, ON: 1998. Softcover, coil-bound, 8x11, 186 pp.

This text contains nine chapters that explain occupational therapy and sensory integration, and provides many useful checklists for assessing the source of children's difficulties, as well as strategies and management suggestions. It is a good resource and contains information not usually available in other books.

Social Relationships

Aarons, Maureen, and Tessa Gittens. *Autism: A Social Skills Approach for Children and Adolescents.* Oxon, UK: Winslow Press, 1998. ISBN: 0-86388-202-1. Softcover, 8x11, coil-bound, 97 pp.

This text contains a general overview of social skills group activities for pre-school and school-age children, with some useful forms for parents and teachers.

Attwood, Tony. *Exploring Feelings: Cognitive Behaviour Therapy to Manage ANXIETY.* Arlington, TX: Future Horizons, 2004. Softcover, 8x11, 79 pp.

This workbook contains activities and worksheets to help children recognize and develop tools to manage anxiety. It could be used with Middle Years and older students by resource teachers or clinicians.

Duke, Marshall P., and Stephen Nowicki, Jr. *Helping the Child Who Doesn't Fit In.* Atlanta, GA: Peachtree Publishers, 1992. ISBN: 1-56145-025-1. Softcover, 6x9, 175 pp.

See description below.

Duke, Marshall P., Stephen Nowicki, Jr, and Elizabeth Martin. *Teaching Your Child the Language of Social Success.* Atlanta, GA: Peachtree Publishers, 1996. ISBN: 1-56145-126-6. Softcover, 6x9, 175 pp.

These texts focus on children diagnosed with dyssemia (difficulty in using and understanding non-verbal signs and signals), but strategies and suggestions for interpreting and using all aspects of non-verbal communication are applicable to ASD as well. <www.peachtree-online.com>

Gajewski, Nancy, Polly Hirn, and Patty Mayo. *Social Star: General Interaction Skills (Book 1) and Social Star: Peer Interaction Skills (Book 2.)* Eau Claire, WI: Thinking Publications, 1993. ISBN: 0-930599-79-9 (Book 1) and 0-930599-91-8 (Book 2). Both softcover, 8x11, 460 pp.

Both volumes contain many ideas, activities, and forms for teaching basic interaction skills.

Garrity, Carla, Kathryn Jens, William Porter, Nancy Sager, and Cam Short-Camilli. *Bully-Proofing Your School.* Longmont, CO: Sopris West, 1994-1998. ISBN: 0-1696786-1-5. Softcover, 8x11, 368 pp.

Useful on a school-wide, group, or individual basis, this text contains useful and reproducible forms for social problem-solving and anger management. <www.sopriswest.com>

Gray, Carol. *Comic Strip Conversations.* Arlington, TX: Future Horizons, 1994. Softcover, 8x11, 25 pp.

See description below.

– – –. *Taming the Recess Jungle: Socially Simplifying Recess for Students with Autism and Related Disorders.* Jenison, MI: Jenison Public Schools, 1993. Softcover, 8x11, 25 pp.

These texts offer practical, useful, and illustrated suggestions for helping children understand and manage emotions and understand others, for improving the recess experience, and for explaining ASD to a child's classmates as the lack of the sixth or "social" sense. <www.TheGrayCenter.org>

Greenspan, Stanley I., and Serena Wieder. *The Child with Special Needs: Encouraging Intellectual and Emotional Growth.* Cambridge, MA: Perseus Books, 1998.

Gutstein, Steven. *Autism Asperger: Solving the Relationship Puzzle.* London: Jessica P. Kingsley, 2000.

Gutstein, Steven, and Rachelle Sheely. *Relationship Development Intervention with Young Children: Social and Emotional Development Activities for Asperger Syndrome, Autism, Pervasive Developmental Disorder and Nonverbal Learning Disability.* London: Jessica P. Kingsley, 2001. ISBN: 1-84310-714-7. Softcover, 8x11, 250 pp.

This volume accompanies Gutstein's *Autism Asperger: Solving the Relationship Puzzle* (see **Early Development**.) This "how-to" manual is full of examples of goals and activities, highly usable in home, school, or other settings. <www.connectionscenter.org>

Heinrichs, Rebekah. *Perfect Targets: Asperger Syndrome and Bullying.* Shawnee Mission, KA: AAPC, 2003. ISBN: 931282-18-8. Softcover, 5x8, 186 pp.

Subtitled *Practical Solutions for Surviving the Social World*, this text identifies characteristics of AS that make students with AS more likely to be bullied, individual and systemic strategies that these students can use and first-person accounts. <www.asperger.net> or <heinrichs@aspergerinformation.org>

Jenson, William R., Ginger Rhode, and H. Kenton Reavis. *The Tough Kid Tool Box.* Longmont, CO: Sopris West, 1994-2000. ISBN: 1-57035-000-0. Softcover, 8x11, 213 pp.

This text is useful for teaching individual and group social skills and contains many reproducible forms and posters. Part of a series. <www.sopriswest.com>

Johnson, Anne Marie, and Jackie L. Susnik. *Social Skills Stories: Functional Picture Stories for Readers and Non-Readers K-12* and *More Social Skills Stories.* Solana Beach, CA: Mayer-Johnson, 1995. ISBN: 1-884135-21-8. Softcover, 8x11, spiral-bound, 397 pp.

Both texts provide large and small black and white illustrations and accompanying worksheets describing common social situations and teaching appropriate responses.

Mahoney, Gerald and Frida Perales. "Using Relationship-Focused Intervention to Enhance the Social-Emotional Functioning of Young Children with Autism Spectrum Disorders." *Topics in Early Childhood Special Education* 23.2 (Summer 2003): 77-89.

Moyes, Rebecca A. *Incorporating Social Goals into the Classroom: A Guide for Teacher and Parents of Children with High Functioning Autism and Asperger's Syndrome.* London: Jessica P. Kingsley, 2001. ISBN: 1-85302-967x. Softcover, 5x8, 181 pp.

This text is full of practical, hands-on strategies, and lesson plans for addressing social deficits as they appear in classrooms.

Quill, Kathleen Ann. *Teaching Children with Autism: Strategies to Enhance Communication and Socialization.* Toronto, ON: Delmar, 1995.

Sheridan, Susan M. *The Tough Kid Social Skills Book.* Longmont, CO: Sopris West, 1997. ISBN: 1-57035-051-5. Softcover, 8x11, spiral-bound, 219 pp.

Part of a series, this text is useful for teaching individual and group social skills and contains many useful and reproducible forms and posters. <www.sopriswest.com>

Smith, Melinda J. *Teaching Play Skills to Children with Autistic Spectrum Disorder*. New York, NY: DRL Books, 2001. ISBN: 0-9665266-3-5. Softcover, 8x11, 173 pp.

This is a practical hands-on guide written by a parent and medical doctor who saw a need to incorporate play skills into her son's intensive Applied Behavior Analysis therapy. This book would be very useful to parents, and community and school professionals, providing a rationale for "why" as well as many suggestions for "how-to" teach children to explore their world, to entertain themselves, and to play and interact with other people.

Street, Annabelle, and Robert Cattoche. *Picture the Progress.* Eugene, OR: Educational Horizons, 1995. Softcover, spiral-bound, 109 pp.

This book contains many line drawings of appropriate behaviours in classroom, social, and other settings, with suggestions for customizing for individual situations and for use of behaviour charts.

Sussman, Fern. *More Than Words: Helping Parents Promote Communication and Social Skills in Children with Autism Spectrum Disorder*. Toronto, ON: The Hanen Centre, 1999.

Weiss, Mary Jane, and Sandra L. Harris. *Reaching Out, Joining In: Teaching Social Skills to Young Children with Autism.* Bethesda, MD: Woodbine House, 2001. ISBN: 1-890627-24-0. Softcover, 5x7, 155 pp.

This text provides suggestions for teaching play skills, social communication, and social interaction.

Wilson, Carolyn C. *Room 14: A Social Language Program, Instructor's Manual.* East Moline, IL: LinguiSystems, 1993.

Winner, Michelle Garcia. *Thinking about You, Thinking about Me: Philosophy and Strategies to Further Develop Perspective Taking and Communicative Abilities for Persons with Social-Cognitive Deficits.* Shawnee Mission, KA: AAPC, 2000. ISBN: 0-9701320-1-8. Softcover, 8x11, 207 pp.

This is a companion to the volume below, and would also serve as a hands-on workbook for professionals working individually or with groups on social-cognitive skills such as thinking out loud, perspective-taking, and social mapping. It contains a good bibliography and suggested activity resources. <www.asperger.net> or <www.socialthinking.com>

– – –. *Inside Out: What Makes a Person with Social Cognitive Deficits Tick.* Shawnee Mission, KA: AAPC, 2000. ISBN: 0-970132-0-X. Softcover, spiral-bound, 201 pp.

This text for professionals functions as a workbook for students with Asperger Syndrome, High Functioning Autism, Non-Verbal Learning Disability, or Pervasive Developmental Disorder—Not Otherwise Specified. <www.asperger.net> or <www.socialthinking.com>

Wolfberg, Pamela J. *Peer Play and the Autism Spectrum: The Art of Guiding Children's Socialization and Imagination.* Shawnee Mission, KA: AAPC, 2003. ISBN: 1-931282-17-X. Softcover, 8x11, 264 pp.

This is an exhaustive, step-by-step manual to assess levels of play skills and to plan and operate Integrated Play Groups. It would be most useful for resource teachers and guidance counsellors in school settings and for those working in daycare or other community settings. <www.wolfberg.com> or <www.autisminstitute.com>

Social Stories (see also Social Relationships)

Baker, J. *The Social Skills Picture Book: Teaching Play, Emotion and Communication to Children with Autism.* Arlington, TX: Future Horizons, 2001.

This text combines social skills training with a social stories approach, using coloured photos of children to illustrate the right and wrong ways to handle interactions involving communication, play, and emotions.

Gray, Carol. *Taming the Recess Jungle: Socially Simplifying Recess for Students with Autism and Related Disorders.* Jenison, MI: Jenison Public Schools, 1993.

– – –. *Comic Strip Conversations: Colorful, Illustrated Interactions with Students with Autism and Related Disorders.* Jenison, MI: Jenison Public Schools, 1994.

– – – . *The New Social Story Book.* Arlington, TX: Future Horizons, 2000.

Illustrated and updated from previous editions, this text contains social stories written under the supervision of Carol Gray. <www.TheGrayCenter.org>

Gray, Carol, and Abbie Leigh White, eds. *My Social Stories Book.* London: Jessica P. Kingsley, 2002. Softcover, 6x9, 141 pp.

Intended for young children, this text contains dozens of stories relating to self-care and home and community issues, some with illustrations. For example: "When do children brush their teeth?" "What is a doorbell?" and "What do people do at the beach?"

Reese, Pam Britton, and Nena C. Challenner. *Primary, Intermediate and Adolescent Social Skills Lessons.* East Moline, IL: LinguiSystems, 1999.

Each of these sets, available separately, has five softcover 8x11 books with illustrated examples of social stories that describe many typical situations for children with ASD at each age level. The illustrations are simple black and white line drawings, allowing the stories to be customized for specific situations. <www.linguisystems.com>

Also see:

Gagnon under **Asperger's Syndrome/HFA**

Johnson and Susnik and Street under **Social Relationships**

<www.usevisualstrategies.com> and <www.do2learn.com> for line drawings for use in social stories

Visual Strategies

Frost, Lori A., and Andrew S. Bondy. *PECS (The Picture Exchange Communication System: Training Manuel.* Cherry Hill, NJ: Pyramid Educational Consultants, 1994.

– – –. *A Picture's Worth: PECS and Other Visual Communication Strategies in Autism.* Bethesda, MD: Woodbine House, 2001. ISBN: 0-933149-96-4. Softcover, 5x7.

This text provides a good description of the Picture Exchange Communication System written by the originator of PECS, as well as other augmentative strategies for children with limited or no verbal skills. <www.woodbinehouse.com>

Hodgdon, Linda, M. *Visual Strategies for Improving Communication.* Troy, MI: Quirk Roberts, 1995. ISBN: 0-676986-1-5.

– – –. *Solving Behaviour Problems in Autism: Improving Communication with Visual Strategies.* Troy, MI: Quirk Roberts, 1999. ISBN: 0-9616786-2-2. Softcover, 8x11, 222 pp.

Both contain a wealth of practical suggestions and illustrations. <www.usevisualstrategies.com>

Moore, Susan Thompson. *Asperger Syndrome and the Elementary School Experience: Practical Solutions for Academic and Social Difficulties.* Shawnee Mission, KA: AAPC, 2002.

Myles, Brenda Smith, and Diane Adreon. *Asperger Syndrome and Adolescence: Practical Solutions for School Success.* Shawnee Mission, KA: AAPC, 2001.

Reese, Pam Britton, and Nena C. Challenner. *Primary, Intermediate and Adolescent Social Skills Lessons.* East Moline, IL: LinguiSystems, 1999.

Savner, Jennifer L., and Brenda Smith Myles. *Making Visual Strategies Work in the Home and Community: Strategies for Individuals with Autism and Asperger Syndrome.* Shawnee Mission, KS: AAPC, 2000. ISBN: 0-9672514-6-X. Softcover, coil-bound, 33 pp.

This is a very good brief introduction, for parents and others, to the use of visual supports to help children to learn routines, to manage emotions, and to gain independence. Every page has several good visual examples. <www.asperger.net>

Street, Annabelle, and Robert Cattoche. *Picture the Progress.* Eugene, OR: Educational Horizons, 1995.

Sources

Books on this list are available from publishers as noted, and most are also available from one of these companies.

Autism Asperger Publishing Company
P.O. Box 66283
Shawnee Mission, KS
66283 USA
<www.asperger.net>

Exceptional Resources
116-11728 Kingsway Avenue
Edmonton, AB
T5G 0X5
<www.canadianautism.com>

The Hanen Centre
1075 Bay Street Suite 403
Toronto, ON
M5S 3B1
<www.hanen.org>

Indiana Resource Center for Autism
Institute for the Study of Developmental Disabilities
Indiana University
2853 East Tenth Street
Bloomington, IN
47405 USA
Tel: (812) 855-6508

Mayer-Johnson, Inc.
P.O. Box 1579
Solana Beach, CA
92075-7579 USA

National Autistic Society
393 City Road
London, England EC1V 1NG
<www.nas.org.uk>

Parentbooks
201 Harbord Street
Toronto, ON
M5S 1H6
<www.parentbookstore.com>

For Canadian purchasers, most of these books are available from <www.parentbookstore.com> or <www.canadianautism.com> **or** <www.autismawarenesscentre.com>

Books may also be ordered from local bookstores.

ASD Adults

<www.faaas.org>
<www.amug.org/~a203/jobsheld.html>
<www.inlv.demon.nl/>
<www.narpaa.org>

Asperger/High Functioning Autism

<www.udel/edu/bkirby.asperger.html>
<www.iol.ie/~wise.autinet>
<www.TonyAttwood.com>
<www.socialthinking.com>
<www.aspie.org>
<www.asperger.org>
<www.aspenj.org>
<www.connectionscenter.com>
<www.maapservices.org>

Communication

<www.usevisualstrategies.com>
<www.do2learn.com>

Early Intervention

<http//:www.coping.org>

Explaining about ASD

<kidshealth.org/kid/health_problems/brain/autism.html>

General

<www.TheGrayCenter.org>
<www.autism.org>
<www.autism-society.org>
<www.autismsocietycanada.org>
<www.iidc.indiana.edu/~irca>

Parenting (see also Explaining)

<www.do2learn.com>
<www.seattlechildrens.org/sibsupp>
<www.nichcy>

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Baron-Cohen, Simon, et al. "The Early Identification of Autism: The Checklist for Autism in Toddlers (CHAT)." *Journal of the Royal Society of Medicine 93* (2000): 521-525.

British Columbia Ministry of Education, Special Programs Branch. *Teaching Students with Autism: A Resource Guide for Schools.* Victoria, BC: British Columbia Ministry of Education, 2000.

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– – –. *Success for All Learners: A Handbook on Differentiating Instruction.* Winnipeg, MB: Manitoba Education and Training, 1996.

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Manitoba Education, Training and Youth. *Reporting on Student Progress and Achievement: A Policy Handbook for Teachers, Administrators, and Parents.* Winnipeg, MB: Manitoba Education, Training and Youth, 1997.

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Feedback Form

Manitoba Education, Citizenship and Youth welcomes your response to the enclosed document and invites you to complete and return this feedback form.

Document Title: *Supporting Inclusive Schools: A Handbook for Developing and Implementing Programming for Students with Autism Spectrum Disorder*

Document Type: Support

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☐ School Trustee ☐ School Division/Education Authority Administrator

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Document Title: *Supporting Inclusive Schools: A Handbook for Developing and Implementing Programming for Students with Autism Spectrum Disorder*

Feedback Form, Page 2

5. Explain which aspect(s) of the resource you found to be

   a. most useful:

   b. least useful:

6. Additional comments:

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